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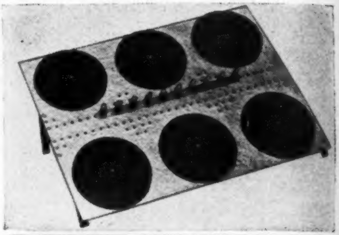

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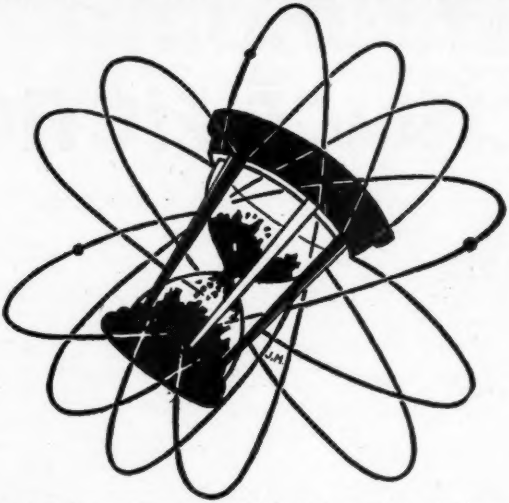

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EDITORIAL

OVERCOMPENSATION

AS MOST psychologists will admit, the majority of people who go into psychology do so because they have psychological problems they want to find solutions for. And most people who go into sociology have social problems they want to solve. The result of this perfectly expectable situation is that there's a tendency on the part of both of these groups toward a serious misrepresentation of the nature of the problem of Juvenile Delinquency.

A neurotic problem presents, to its individual possessor, an extremely difficult situation; it is something that he literally, genuinely, cannot control. Now in any system of fair justice, no man can be held responsible for something over which he has no control. If you're driving a car, and the steering mechanism suddenly snaps due to metal-fatigue cracking . . . the car may run over and kill someone. You cannot be held guilty of the act; you had no ability to control the movement of the car.

However, be it noted that you are *legally* responsible, and can be sued for the resultant damages. It's up to you, as a driver, to carry adequate liability insurance; that you *are* responsible for.

But there is no moral responsibility; there is no "guilt," since there was, very genuinely, nothing any human being not gifted with prescience could have done. If anyone might be said to be morally responsible, it would be the last automobile mechanic who examined and serviced the steering mechanism—and even that's pretty low-grade responsibility, since metal fatigue can be detected, before failure occurs, only by highly specialized instrumental tests.

The psychological fraternity is sincerely, honestly, and with absolute validity, seeking to make people aware of the fact that neurotic problems fall in the class of "not within the control of the individual." They are perfectly correct; like it or not, and very few people do, any neurotic problem you have is something you can not control. By definition; that's what's meant by a neurotic problem.

Further, we *all* have them. We don't all have the same ones, of course, and some of them a given individual may have can be limited to areas so improbable-of-encounter as to be of no importance. If Julius Caesar had had an absolutely uncontrollable terror of airplane flight, for instance, he would have had a true neurotic problem—but in an area of zero - probability - of - encounter. (Unless kidnaped by extraterrestrial aliens visiting Earth at the time.)

Beginning with Freud, clear recognition has been developing that individuals *do* have genuinely uncontrollable compulsions and inhibitions—behavior-responses for which they are, genuinely, not responsible, any more than the driver of a car with broken steering wheel is responsible for the smash-up that follows.

In this, and to that exact extent, they are correct.

And in that, and to that extent, the general feeling that "all that guy needs is a good boot in the tail" or that "he's just lazy" or a "coward," is absolutely wrong. Not relatively wrong, or partly wrong—completely and absolutely wrong.

The martyr is a man with a neurotic compulsion that we hold to be a good idea. And he is an individual with a neurotic drive so uncontrollable that, in the fully acknowledged face, and even the direct and present experience, of torture without limit, he *cannot* alter his behavior. It's futile to say, "But he could, if he wanted to! He won't because he knows he's right!" That's a meaningless noise; he *can't* want to; that's why it's a true compulsion. No matter how desperately he may "want to" at a conscious level, he still can't want to at the true level of subconscious desire.

Unlimited conscious desire to do Alpha hasn't the slightest effect on a neurotic compulsion. The conscious mind has no control—and cannot, therefore, be held responsible.

In this, the psychologists and sociologists are perfectly correct in their attitudes toward the JD problem. There is no use whatever in punishing the kid; he has no moral responsibility, any more than the "driver" of the broken car, who, because of the break, cannot in fact drive the car, but can only helplessly ride along in it.

Where the psychologists and sociologists are hopelessly, one hundred per cent wrong is in their catastrophic and intransigent failure to distinguish between the neurotic problem, and plain, ordinary, old-fashioned lack of discipline. Not *all* accidents are caused by failure of the steering gear; most are caused by drivers being damn fools. A drunken driver *is* morally responsible, as well as legally responsible. A driver busy playing games with his girl-friend is morally and legally guilty of the accident he causes. A driver who gets mad at another driver for some petty annoyance, and drives recklessly to "punish" the other fellow, isn't the victim of faulty mechanism.

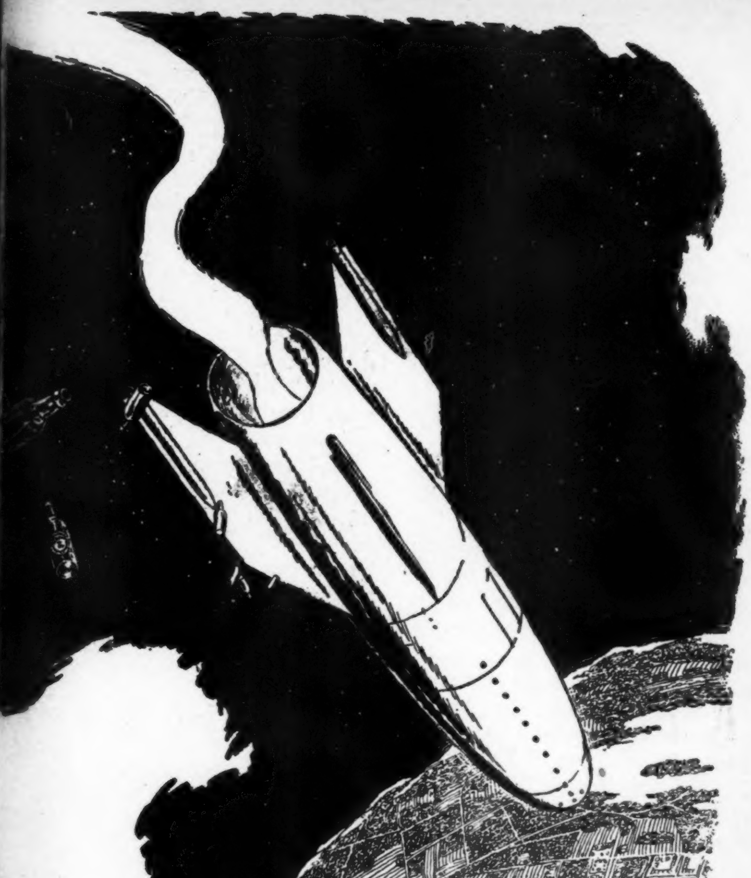
The Juvenile Delinquency problem arising more and more today stems

(*Continued on page* 158)

A BICYCLE BUILT FOR BREW

BY POUL ANDERSON

First of Two Parts. *This, friends, is not exactly serious science fiction—and who ever said science fiction had to be serious!*



Illustrated by
van Dongen

MERCURY GIRL, Black Sphere Line of Anguklukkakok City, Venusian Imperium, requesting permission to land and discharge cargo."

"Ah. Yiss," said the large red-haired man in the visiscreen. "Venusian ownership, et? An' fwhat moight your registhry be?"

Captain Dhan Ghopal Radhakrishnan blinked mild brown eyes in some astonishment and said: "Panamanian, of course."

"Was that your last port iv call?"

"No, we came via Venus. But I say, what has this to do with—"

"Let me see, let me see." The man in the screen rubbed a gigantic paw across a freckled snub nose. He was young and cheerful of appearance; but since when had the portmaster of Grendel—of any asteroid in the Anglian Cluster—worn a uniform of such blazing green?

"An' moight Oi hear fwhat cargo ye have concoigned locally?" he asked. It was definitely not a Grendelian accent he had. York? Scotia? No. Possibly New Belfast. Having maintained his Earthside home for years in Victoria, B.C., Captain Radhakrishnan fancied himself a student of English dialects. However—

"A thousand cases of Nashornbräu Beer and six ten-ton barrels of same, miscellaneous boxes of pretzels and popcorn, all for the Alt Heidelberg Rathskeller," he answered. "Plus goods for other ports, of course, notably a shipment of exogenetic cattle embryos for Alamo. Those have all been cleared for passage through intermediate territories."

"Indayd. Indayd." The young man nodded with a sharpness that bespoke decision. " 'Tis all roight, thin. Give us a location signal an' folly the GCA beam into Berth Ten."

Captain Radhakrishnan acknowledged and signed off, adjusting his monocle nervously the while. Something was not all right. Definitely not. He turned the console over to the mate and switched the ship's intercom to Engine Room. "Bridge speaking," he intoned. "I say, Mr. Syrup, have you any notion what's going on here?"

Knud Axel Syrup, chief and only engineer of the *Mercury Girl,* started and looked over his shoulder. He had been cheating at solitaire. "Not'ing, skipper, yust not'ing," he mumbled, tucking a beer bottle under a heap of cotton waste. His pet crow Claus leered cynically from a perch on a fuel line but for a wonder remained silent.

"You weren't tuned into my talk with the portmaster chap?"

Herr Syrup rose indignantly to his feet. He even sucked in his paunch. "I ban tending to my own yob," he said. "Ban busier dan a Martian in rutting season. Ven are de owners going to install a new Number Four spinor? Every vatch I got to repair ours again vit' shewing gum and baling vire."

"When this old bucket of rust earns enough to justify it," sighed Radhakrishnan's voice. "You know as well as I do, she's barely paying her own way. But what I meant to say is, this portmaster chap. Got a brogue you could put soles on, y' know, and wearing some kind of uniform I never saw before."

"Hm-m-m." Herr Syrup rubbed his shining bald pate and scratched the fringe of brownish hair beneath it. He blew out his blond walrus mustache, blinked watery blue eyes, and ventured: "Maybe he is from de Erse Cluster. I don't t'ink you ever ban dere; I vas vunce. It's approashing conyunction vit' Anglia now. Maybe he come here and got a yob."

"But his uniform—"

"So dey shanged de uniform again. Who can keep track of all dese little nations in de Belt, ha?"

"Hm-m-m . . . well, perhaps. Perhaps. Though I wonder . . . something dashed odd, don't y' know . . . Well, no matter, as you say, no matter, no matter. Got to carry on. Stand by for approach and landing, maneuver to commence in ten minutes."

"*Ja, ja, ja,*" grumbled Herr Syrup. He fetched out his bottle, finished it, and tossed it into the waste chute which spunged it into space. Before he rang for his deckhand assistant, Mr. Shubbish, he put a blue jacket over his tee shirt and an officer's cap on his head. The uniform was as faded and weary as the ship: more so, perhaps, for he made an effort to keep the vessel patched, painted, and scrubbed.

A long blunt-nosed cylinder, meteor-pocked, patchplated, and rust-streaked from many atmospheres, the *Mercury Girl* departed free-fall orbit and spiraled toward the asteroid. The first thing she lost was an impressive collection of beer bottle satellites. Next she lost her crew's temper, for the aged compensator developed a sudden flutter under deceleration and the men and Martians found their internal gyrogravitic field varying sinusoidally between 0.5 and 1.7 Earth gees.

That was uncomfortable enough to make them forget the actual hazard it added. Landing on a terraformed worldlet is tricky enough under the best conditions. The gyrogravitic generators at its center of mass are not able to increase the potential energy of the entire universe, but must content themselves with holding a reasonable atmospheric envelope. Accordingly, their field is so heterodyned that the force is an almost level one gee for some two thousand kilometers up from the surface; then, within the space of a single kilometer, the artificial attraction drops to zero and the acceleration experienced is merely that due to the asteroid's mass. Crossing such a boundary is no simple task. It is made worse by the further heterodyning as the spaceship's negative force interacts with the terraformer's positive pull. When the crew are, in addition, plagued with unexpected rhythmic variations in their weight, a smooth transition becomes downright impossible.

Thus the *Mercury Girl* soared to boundary altitude, yawed, spun clear around, bounced a few times, and bucketed her way groundward, shuddering. She scraped steel as she entered berth, with a screech that set teeth on edge at Grendel's antipodes, rocked, came to a halt, and slowly stopped groaning.

"Fanden i helvede!" roared Herr Syrup at the intercom. "Vat kind of a landing do you call dat? I swear de beer is so shook up it explodes! By yumping Yudas—"

"Sacre bleu!" added Claus, fluttering about on ragged black wings. *"Teufelschwantzen und Schwefel!* Damn, blast, fap!"

"Now, now, Mr. Syrup," said Captain Radhakrishnan soothingly. "Now, now, now. After all, my dear fellow, I don't wish to make, ah, invidious comparisons, but the behavior of the internal field was scarcely what . . . what I would expect? Yes. What I would expect. In fact, the cook has just reported himself ill with, ah, what I believe is the first case of seasickness recorded in astronautical history."

Herr Syrup, who had dropped and broken a favorite pipe, was in no mood to accept criticism. He barked an order to Mr. Shubbish, to rip the guts out of the compensator in lieu of its manufacturer, and stormed up the companionway and along clangorous passages to the bridge, where he pushed open the door so it crashed and blew in like a profane whirlwind.

"My dear old chap!" exclaimed the captain. "I say! Please! What will they think?"

"Vat vill obscenity who blankety-blank t'ink?"

"The portmaster and, ah, the other gentleman . . . there." Radhakrishnan pointed at the main viewport and made agitated adjustments to his turban and jacket. "Most irregular. I don't understand it. But he insisted we remain inboard until—Dear, dear, *do* you think you could get some of the tarnish off this braid of mine before—"

Knud Axel Syrup stared at the outside view. Beyond the little spacefield was a charming vista of green meadows, orderly hedgerows, cottages and bowers, a white gravel road. Just below the near, sharply curving horizon stood Grendel's only town; from this height could be seen a few roofs and the twin spires of St. George's. The flag of the Kingdom, a Union Jack on a Royal Stuart field, fluttered there under a sky of darker blue than Earth's, a small remote sun and a few of the brightest stars. Grendel was a typical right little, tight little Anglian asteroid, peacefully readying for the vacation-season influx of tourists from Briarton, York, Scotia, Holm, New Winchester, and the other shires.

Or was it? For the flagstaff over the spaceport carried an alien banner, white, with a shamrock and harp in green. The two men striding over the concrete toward the ship wore clover-colored tunics and trousers, military boots and sidearms. Similarly uniformed men paced along the wire fence or waited by machine-gun nests. Not far away was berthed a space freighter, almost as old and battered as the *Girl* but considerably larger. And—and—

"*Pest og forbandelse!*" exclaimed Herr Syrup.

"What?" Captain Radhakrishnan swiveled worried eyes toward him.

"Plague and damnation," translated the engineer courteously.

"Eh? Where?"

"Over dere." Herr Syrup pointed. "Dat odder ship. Don't you see? Dere is a gun turret cobbled onto her!"

"Well . . . I'll be . . . goodness gracious," murmured the captain.

Steps clanging on metal and a hearty roar drifted up to the bridge, together with a whiff of cool country air. In a few moments the large redhead entered the bridge. Behind him trailed a very tall, very thin, and very grim-looking middle-aged man.

"The top iv the mornin' to yez," boomed the young one. He attempted a salute. "Major Rory McConnell iv the Shamrock League Irredentist Expeditionary Force, *at* your ser-r-r-vice!"

"What?" exclaimed Radhakrishnan. He gaped and lifted his hands. "I mean . . . I mean to say, don't y' know, what? Has a war broken out? Or has it? Mean to say, y'know," he babbled, "we've had no such information, but then we've been en route for some weeks and—"

"Well, no." Major Rory McConnell shoved back his disreputable cap with a faint air of embarrassment. "No, your honor, 'tis not exactly a war we're havin'. More an act iv justice."

The thin, razor-creased man shoved his long nose forward. "Perhaps Oi should explain," he clipped, "bein' as Oi am in command here. 'Tis indayd an act iv necessary an' righteous justice we are performin', afther fwhat the spalpeens did to us forty years agone come St. Matthew's Day." His dark eyes glowed fanatically. "The fact is, in order to assert the roightful claims iv the Erse nation ag'inst the unprovoked an' shameless aggression iv the . . . pardon me language . . . English iv the Anglian Kingdom—the fact is, this astheroid is now undher military occupation." He clicked his heels and bowed. "Permit me to inthrojuice meself. Jiniral Scourge - iv - the - Sassenach O'Toole, iv the Shamrock League Irredentist—"

"*Ja, ja,*" said Herr Syrup. He still carried a cargo of anger to unload on someone. "I heard all dat. I also heard dat de Shamrock League is only a political party in de Erse Cluster—"

Scourge-of-the-Sassenach O'Toole winced. "Please. Saorstat Erseann."

"So vat you ban doing vit' a private filibustering expedition, ha? And vat has it got to do vit' us?"

"Well," said Major Rory McConnell, not quite at ease, "the fact is, your honors, Oi'm sorry to be sayin' it, but ye can't layve here jist now."

"What?" cried Captain Radhakrishnan. "Can't leave? What do you mean, sir?" He drew himself up to his full 1.6 meters. "This is a Venusian ship, may I remind you, of Terrestrial registry, and engaged on its . . . er, ahem . . . its lawful occasions. Yes, that's it, its lawful occasions. You can't detain us!"

McConnell slapped his sidearm with a meaty hand. "Can't we?" he asked, brightening.

"But . . . look here . . . see here, my dear chap, we're on schedule. We're expected at Alamo, don't y' know, and if we don't report in—"

"Yiss. There is that. 'Tis been anticipated." General O'Toole squinted at them. Suddenly he pointed a bony finger at the engineer. "Yez! Fwhat moight your name be?"

"I ban Knud Axel Syrup of Simmerblle, Langeland," said the engineer indignantly, "and I am going to get in touch vit' de Danish consul at—"

"Misther *who?"* interrupted McConnell.

"Syrup!" It is a perfectly good Danish name, though like Middelfart it is liable to misinterpretation by foreigners. "I vill call my consulate on New Vinshester, *ja,* by Yudas, I vill even call de vun on Tara in Erse—"

"Teamhair," corrected O'Toole, wincing again.

"You see," said Radhakrishnan, anxiously fingering his monocle, "our cargo to Alamo carries a stiff penalty clause, and if we're held up here any length of time, then—"

"Quiet!" barked O'Toole. His finger stabbed toward the Earthmen. "So 'twas Venus ye were on last, eh? Well, as military commandant iv this occupied astheroid, Oi hereby appoints meself medical officer an' Oi suspect ye iv carryin' Polka Dot Plague."

"Polka Dot!" bellowed Herr Syrup. A red flush went up from his hairy chest till his scalp gleamed like a landing light. "Vy, you spoutnosed son of a Svedish politician, dere hasn't been a case of Polka Dot in all de Imperium for tventy-five Eart' years!"

"Possibly," snapped O'Toole. "Howivver, undher international law the medical officer iv inny port has a roight an' djuty to hold inny vessel in quarantine whin he suspects a dangerous disayse aboard. Oi suspects Polka Dot Plague, an' this whole astheroid is hereby officially quarantined."

"But!" wailed Radhakrishnan.

"Oi think six wayks will be long enough," said O'Toole more gently. "Maynwhoile ye'll be free to move about an'—"

"Six weeks here will ruin us!"

"Sorry, sor," answered McConnell. He beamed. "But take heart, ye're bein' ruined in a good cause: redressin' the wrongs iv the Gaelic race!"

Fuming away on a pipe which would have been banned under any smog-control ordinance, Knud Axel Syrup bicycled into Grendel Town. He ignored the charm of thatch and tile roofs, half-timbered Tudor façades, and swinging signboards. Those were for tourists, anyway; Grendel lived mostly off the vacation trade. But it did not escape him how quiet the place was, its usual cheerful preseason bustle dwindled to a tightlipped housewife at the greengrocer's and a bitterly silent dart game in the Crown & Castle.

Occasionally a party of armed Erse, or a truck bearing the shamrock sign, went down the street. The occuping force seemed composed largely of very young men, and it was not professional. The uniforms were homemade, the arms a wild assortment from grouse guns up through stolen rocket launchers, the officers were saluted when a man happened to feel like saluting, and the idea that it might be a nice gesture to march in step had never occurred to anyone.

Nevertheless, there was something like a thousand invaders on Grendel, and their noisy, grinning, well-meaning sloppiness did not hide the fact that they could be tough to fight.

Herr Syrup stopped at the official bulletin board in the market square. Brushing aside ivy leaves, the announcement of a garden party at the vicarage three months ago, and a yellowing placard wherein the Lord Mayor of Grendel invited bids for the construction of a fen country near the Heorot Hills, he found the notice he was looking for. It was gaudily hand-lettered in blue and green poster paints and said:

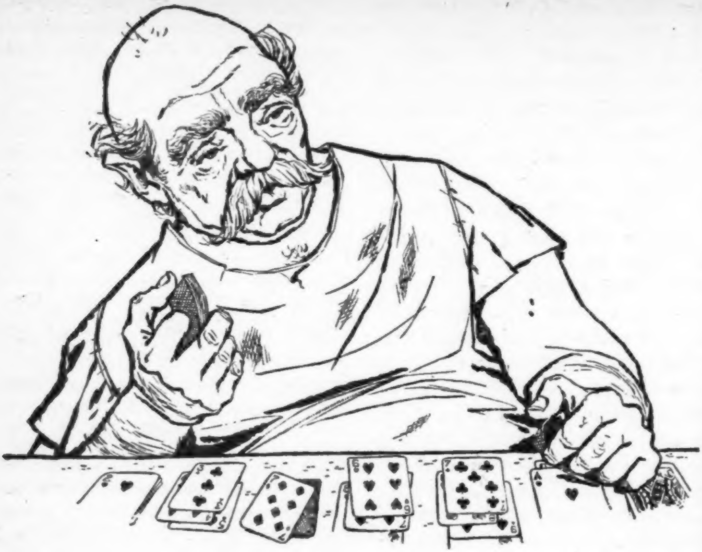
KNOW ALL MEN BY THESE PRESENTS

Forty Earth-years ago, when the planetoid clusters of Saorstat Erseann and the Anglian Kingdom were last approaching conjunction, the asteroid called Lois by the Anglians but rightfully known to its Erse discoverer Michael Boyne as Laoighise (pronounced Lois) chanced to drift between the two nations on its own skewed orbit. An Anglian prospecting expedition landed, discovered rich beds of praseodymium, and claimed the asteroid in the name of King James IV. The Erse Republic protested this illegal seizure and sent a warship to remove the Anglian squatters, only to find that King James IV had caused two warships to be sent; accordingly, despite this severe provocation, the peace-loving Erse Republic withdrew its vessel. The aforesaid squatters installed a powerful gyrogravitic unit on Laoighise and diverted its orbit into union with the other planetoids of the Anglian Cluster. Since then Anglia has remained in occupation and exploitation.

The Erse Republic has formally protested to the World Court, on the clear grounds that Michael Boyne, an Erse citizen, was the first man to land on this body. The feeble Anglian argument that Boyne did not actually claim it for his nation and made no effort to ascertain its possible value, cannot be admissible to any right-thinking man; but for forty Earth-years the World Court, obviously corrupted by Stuart gold, has upheld this specious contention.

Now that the Erse and Anglian nations are again orbiting close toward each other, the Shamrock League Irredentist Expeditionary Force has set about rectifying the situation. This is a patriotic organization which, though it does not have the backing of its own government at the moment, expects that this approval will be forthcoming and retroactive as soon as our sacred mission has succeeded. Therefore, the Shamrock League Irredentist Expeditionary Force is not piratical, but operating under international laws of war, and the Geneva Convention applies. As a first step in the recovery of Laoighise, the Shamrock League Irredentist Expeditionary Force finds it necessary to occupy the asteroid Grendel.

All citizens are, therefore, enjoined to co-operate with the occupying authorities. The personal and property rights of civilians will be respected provided they refrain from interference with the lawfully



constituted authorities, namely ourselves. All arms and communications equipment must be surrendered for sequestration. Any attempt to leave Grendel or communicate beyond its atmosphere is forbidden and punishable under the rules of war. All citizens are reminded again that the Shamrock League Irredentist Expeditionary Force is here for a legitimate purpose which is to be respected.

Erin go bragh!

General Scourge-of-the-Sassenach O'Toole
Commanding Officer, S.L.I.E.F.
per: Sgt. 1/cl Daniel O'Flaherty
(New Connaught O'Flahertys)

"Ah," said Herr Syrup. "So."

He pedaled glumly on his way. These people seemed to mean business.

Though he sometimes lost his temper, Knud Axel Syrup was not a violent man. He had seen his share of broken knuckles, from St. Pauli to Hellport to Jove Dock; he much preferred a mug of beer and a friendly round of pinochle. The harbor girls could expect no more from him than a fatherly smile and a not quite fatherly pat; he had his Inga back in Simmerblle. She was a good wife, aside from her curious idea that he would instantly fall a prey to pneumonia without an itchy scarf around his neck. Her disapproval of the myriad little nations which had sprung up throughout the Solar System since gyrogravitics made terraforming possible was more vocal than his; but, in a mild and tolerant way, he shared it. Home's best.

Nevertheless, a man had some right to be angry! For instance, when a peso-pinching flock of Venusian owners, undoubtedly with more scales on their hearts than even their backs, made him struggle along with a spinor that should have been scrapped five years ago . . . But what, he asked himself, is a man to do? There were few berths available for the aging crew of an aging ship, without experience in the latest and sleekest apparatus. If the *Mercury Girl* went on the beach, so, most likely, did Knud Axel Syrup. Of course, there would be a nice social worker knocking at his home to offer a nice Earthside job . . . say, the one who had already mentioned a third assistantship in a food-yeast factory . . . and Inga would make sure he wore his nice scarf every day—Herr Syrup shuddered and pushed his bicycle harder.

At the end of Flodden Field Street he found the tavern he was looking for. Grendel did not try exclusively for an Old Tea Shoppe atmosphere. The Alt Heidelberg Rathskeller stood between the Osmanli Pilaff and Pizen Pete's Last Chance Saloon. Herr Syrup leaned his bicycle against the wall and pushed through an oak door carved with the image of legendary Gambrinus.

The room downstairs was appropriately long, low, and smoky-raftered. Rough-hewn tables and benches filled a candle-lit gloom; great beer barrels lined the walls; sabers hung crossed above rows of steins which informed the world that Gutes Bier and junge Weiber sind die besten Zeitvertreiber. But it was empty. Even for midafternoon, there was something ominous about the silence. The Stuart legitimists who settled the Anglian Cluster had never adopted the closing laws of the mother country—

Herr Syrup planted his stocky legs and stared around. "Hallo!" he called. "Hallo, dere! Is you home, Herr Bachmann?"

It slithered in the darkness behind the counter. A Martian came out. He stood fairly tall for a Martian, his hairless gray cupola of a head-cum-torso reaching past the Earthman's waist, and his four thick walking tentacles carried him across the floor with a speed unusual for his race in Terrestrial gravity. His two arm-tentacles writhed incoherently, his flat nose twitched under the immense brow, his wide lipless mouth made bubbling sounds, his bulging eyes rolled in distress of soul. As he came near, Herr Syrup saw that he had somehow poured himself into an embroidered blouse and *Lederhosen.* A Tyrolean hat perched precariously on top of him.

"Ach!" he piped. *"Wer da? Willkommen, mein lieber Freund, sitzen Sie sich und—"*

"Gud bevare's," asked the engineer, catching his pipe as it fell from his jaws, "vat's going on here? Vere is old Hans Bachmann?"

"Ach, he hass retired," said the

Martian. "I haff taken ofer der pizznizz . . . bardon me, I mean I haff der pizznizz ofergetaken." He stopped in front of his guest, extending three boneless fingers. "My name iss Sarmishkidu. I mean, Sarmishkidu von Himmelschmidt. Sit down und machen derself *gemütlich.*"

"Vell, I am Knud Axel Syrup of de *Mercury Girl.*"

"Ah, die ship vot iss bringing me mine beer? Or vas? Vell, haff a drink." The Martian scuttled off, drew two steinsful, came back and writhed himself onto the bench across the table at which the Earthman had sat down. "*Prosit.*"

A Martian standing anyone a beer was about the most astonishing event of this day. But it was plain to see that Sarmishkidu von Himmelschmidt was not himself. His skin twitched as he filled a Tyrolean pipe, and he fanned himself with his elephantine ears.

"How did you happen to enter dis business?" asked Herr Syrup, trying to put him more at ease.

"Ach! I came here last Uttu-year—Mars-year—on sabbatical. I am a professor of mathematics at Enliluraluma University." Since every citizen of Enliluraluma has some kind of position at the University, usually in the math department, Herr Syrup was not much impressed. "At that time this enterprise was most lucrative. Extrapolating probabilistically, I induced myself to accept Herr Bachmann's offer of a transfer of title. I invested all my own savings and obtained a mortgage on Uttu for the balance—"

"Oh, oh," said Herr Syrup, sympathetically, for not even the owners of the Black Sphere Line could be as ruthless as any and all Martian bankers. They positively enjoyed foreclosing. They made a ceremony of it, at which dancing clerks strewed cancelled checks while a chorus of vice presidents sang a litany. "And now business is not so good, vat?"

"Business is virtually at asymptotic zero," mourned Sarmishkidu. "The occupation, you know. We are cut off from the rest of the universe. And vacation season coming in two weeks! The Erse do not plan to leave for six weeks yet, at a minimum . . . and meanwhile this entire planetoid will have been diverted into a new orbit off the regular trade lanes . . . possibly ruined in the fighting around Lois . . . and in view of all this uncertainty, even local trade has slacked off to negligibility—*Ach, es ist ganz schrecklich!* I iss ruined!"

"But if I remember right," said Herr Syrup, bewildered, "New Vinchester, de Anglian capital, is only about ten t'ousand kilometers from here. Vy do dey not send a varship?"

"They are not aware of it," said Sarmishkidu, burying his flat face in the tankard. "Excuse me, I mean dey do not know vot fumblydiddles is here going on. Before facation time, ve neffer get many ships here. Der Erses landed chust four days ago. Dey took ofer der *Rundfunk,* der raddio, und handled routine messaches as if nottings had happened. Your ship vas der first since der infasion."

"And may be de last," gloomed Herr Syrup. "Dey made some qvack-qvack about plague and qvarantined us."

"Ach, so!" Sarmishkidu passed a dramatic hand over his eyeballs. "Den ve iss ruined for certain. Dot iss chust der excuse der Erses hass been vanting. Now dey can call New Vinchester, making like dey vas der real medical officer, und say der whole place iss qvarantined on suspicion of plague. So natural, no vun else vill land for six veeks, so dey not be qvarantined too und maybe efen get sick. Your owners iss also notified und does not try to infestigate vot hass to you gehappened. So for six veeks der Erses hass a free hand here to do vot dey vant. Und vot dey vant to do meanss der ruin of all Grendel!"

"My captain is still arguing vit' de Erse sheneral," said Herr Syrup. "I am yust de enshineer. But I come down to see if I could save us any-t'ing. Even if ve lose money because of not delivering our cargo to Alamo, maybe at least ve get paid for de beer ve bring you. No?"

"*Gott in Himmel!* Mitout any facation season pizznizz like I vas counting on, vere vould I find der moneys to pay you?"

"I vas afraid of dat," said Herr Syrup.

He sat drinking and smoking and trying to persuade himself that an Earthside job as assistant in a yeast factory wasn't really so bad. Himself told him what a liar he was.

The door opened, letting in a shaft of sun, and light quick steps were heard. A feminine voice cried: "Rejoice!"

Herr Syrup rose clumsily. The girl coming down the stairs was worth rising for, being young and slim, with a shining helmet of golden hair, large blue eyes, pert nose, long legs, and other well-formed accessories.

Her looks were done no harm by the fact that—while she avoided cosmetics—she wore a short white tunic, sandals, a laurel wreath on her head, and nothing else.

"Rejoice!" she cried again, and burst into tears.

"Now, now," said Herr Syrup anxiously. "Now, now, *Frken* . . . er, Miss—now, now, now, yust a minute."

The Martian had already gone over to her. "Dot iss nicht so bad, Emily," he whistled, standing on tiptentacle to pat her shoulder. "Dere, dere. Remember Epicurus."

"I don't care about Epicurus!" sobbed the girl, burying her face in her hands.

"Outis epoidei doi bareias cheiras," said Sarmishkidu bravely.

"Well," wept the girl, "w-well, of course. At least, I hope so." She dabbed at her eyes with a laurel leaf. "I'm sorry. It's just that . . . that . . . oh, everything."

"Yes," said the Martian, "the situation indubitably falls within the Aristotelian definition of tragedy. I have calculated my losses so far at a net fifty pounds sterling, four shillings and thruppence ha'penny per diem."

Wet but beautiful, the girl blinked at Herr Syrup. "Pardon me, sir," she said tremulously. "This situation on Grendel, you know. It's so overwreaking." She put a finger to her lips and frowned. "Is that the word? These barbarian languages! I mean, the situation has us all overwrought."

"Ahem!" said Sarmishkidu. "Miss Emily Croft, may I present Mister, er—"

"Syrup," said Herr Syrup, and extended a somewhat engine-grimy hand.

"Rejoice," said the girl politely. *"Ellenicheis?"*

"Gesundheit," said Herr Syrup.

Miss Emily Croft stared, then sighed. "I asked if you spoke Attic Greek," she said.

"No, I am sorry, I do not even speak basement Greek," floundered Herr Syrup.

"You see," said Miss Croft, "I am a Duncanite—even if it does make Father furious, he's the vicar, you know—and I'm the only one on Grendel. Mr. Sarmishkidu . . . I'm sorry, I mean Herr von Himmelschmidt . . . speaks Greek with me, which does help, even though I cannot approve his choice of passages for quotation." She blushed.

"Since ven has a Martian been talking Greek?" asked the engineer, trying to get some toehold on reality.

"I found a knowledge of the Greek alphabet essential to my study of Terrestrial mathematical treatises," explained Sarmishkidu, "and having gone so far, I proceeded to learn the vocabulary and grammar as well. After all, time is money, I estimate my time as being conservatively worth five pounds an hour, and so by using knowledge already acquired for one purpose as the first step in gaining knowledge of another field, I saved study time worth almost—"

"But I'm afraid Herr von Himmelschmidt is not a follower of the doctrines of the Neo-Classical Enlightenment," interrupted Emily Croft. "I mean, as first expounded by Isadora and Raymond Duncan. I regret to say that Herr von Himmelschmidt is only interested in the, er," she blushed again, charmingly, "less laudable passages out of Aristophanes."

"They are *filthy,"* murmured Sarmishkidu with a reminiscent leer.

"And, I mean, please don't think I have any race prejudices or anything," went on the girl, "but it's just undeniable that Herr von Himmelschmidt isn't, well, isn't meant for classical dancing."

"No," agreed Herr Syrup after a careful study. "No, he is not."

Emily cocked her head at him. "I don't suppose you would be interested?" Her tone was wistful.

Herr Syrup rubbed his bald pate, blew out his drooping mustache, and looked down past his paunch at his Number Twelve boots. "Is classical dancing done barefoot?" he asked.

"Yes! And vine crowned, in the dew at dawn!"

"I vas afraid of dat," sighed Herr Syrup. "No, t'anks."

"Well," said the girl. Her head bent a little.

"But I am not so bad at de hambo," offered Herr Syrup.

"No, thank you," said Miss Croft.

"Vill you not sit down and have a beer vit' us?"

"Zeus, no!" She grimaced. "How could you? I mean, that awful stuff just calcifies the liver."

"Miss Croft drinken only der pure spring vater und eaten der fruits," said Sarmishkidu von Himmelschmidt rather grimly.

"Well, but really, Mr. Syrup," said the girl, "it's ever so much more natural than, oh, all this raw meat and . . . well, I mean if we had no other reason to know it, couldn't you just tell the Erse are barbarians from that dreadful stuff they drink, and all the bacon and floury potatoes and—Well, I mean to say, really."

Herr Syrup sat down by his stein, unconvinced. Emily perched herself on the table top and accepted a few grapes from a bowl of same which Sarmishkidu handed her in a gingerly fashion. The Martian then scuttled back to his own beer and pipe and a dish of pretzels.

"Do you know yust vat dese crazy Ersers is intending to do, anyhow?" asked Herr Syrup.

The girl clouded up again. "That's what I came to see you about, Mr. Sarmishkidu," she said. Her pleasant lower lip quivered. "That terrible Major McConnell! The big noisy red one. I mean, he keeps speaking to me!"

"I am afraid," began the Martian, "that it is not in my province to—"

"Oh, but I mean, he stopped me in the street just now! He, he bowed and . . . and asked me to—Oh, no!" Emily buried her face in her hands, trembling.

"To vat?" barked Herr Syrup, full of chivalrous indignation.

"He asked me if . . . if . . . I would . . . oh . . . would *go to the cinema* with *him!"*

"Vy, vat is playing?" asked Herr Syrup, interested.

"How should I know? It certainly isn't Aeschylus. It isn't even Euripides!" Emily raised a flushed small countenance and shifted gears to wrath. "I thought, Mr. Sarmishkidu, I mean, we've been friends for a while now and we Greeks have to stick together and all that sort of thing, couldn't you just refuse to sell him whisky? I mean, it would teach those barbarians a lesson, and it might even make them go home again, if they couldn't buy whisky, and Major McConnell wouldn't get a calcified liver."

"Spake iv the divvil!" bawled a hearty voice. Huge military boots crashed on the stairs and Major Rory McConnell, all two hundred redhaired centimeters of him, stalked down into the rathskeller. "Pour me a drop iv cheer, bhoy. No, set out the bhottle an' we'll figure the score whin Oi'm done. For 'tis happy this day has become!"

"Don't!" blazed Emily, leaping to her feet.

"Aber, aber det vitsky I sell at four

bob der shot," said Sarmishkidu, slithering hastily off his bench.

Major McConnell made a gallant flourish toward the girl. "To be sure," he roared, "there's no such thing as an unhappy day wi' this colleen about. Surely the good God was in a rare mood whin she was borned, perhaps His favorite littlest angel had jist won the spellin' prize, for faith an' Oi nivver seen a swater bundhle iv charms, not ayven on the Auld Sod herself whin Oi made me pilgrimage."

"Do you see what happens to people who eat meat and drink distilled beverages?" said Emily to Herr Syrup. "They just turn into absolute oafs. I mean to say, you can hear their great feet stamping two kilometers off."

McConnell sprawled onto a bench, leaning against the table and resting his great feet on the floor at the end of prodigious legs. He winked at the Earthman. "She's the loight darlin' on her toes," he agreed, "but thin, she's not jist owerburdhened wi' clothing. Whin Oi make her me missus, that'll have to be changed a bit, but for now 'tis pleasant the soight is."

"Your wife?" screamed Emily. "Why . . . why—" She fought valiantly with herself. At last, in a prim tone: "I won't say anything, Major McConnell, but you will find my reply in Aristophanes, 'The Frogs,' lines—"

"Here der pottle iss," said Sarmishkidu, returning with a flask labeled Callahan's Rose of Tralee 125 Proof. "Und mind you," he added, rolling a suspicious doorknob eye at the Erseman, "ven it comes to paying der score, ve vill machen mit red analytical balances to show how much you haff getaken."

"So be it." McConnel yanked out the stopper and raised the bottle. "To the Honor iv Ireland!" He caught Herr Syrup's eye and added politely: *"Skaal."*

The Dane lifted a grudging stein to him.

" 'Tis the foine day for celebrathin'," burbled McConnell. "Oi've had the word from the injinerin' corps, our new droive unit tests out wan hundred per cint. They'll have it riddy to go in three wayks."

"Oh!" gasped Emily. She retreated into a dark corner behind a beer keg. Even Sarmishkidu began to look seriously worried.

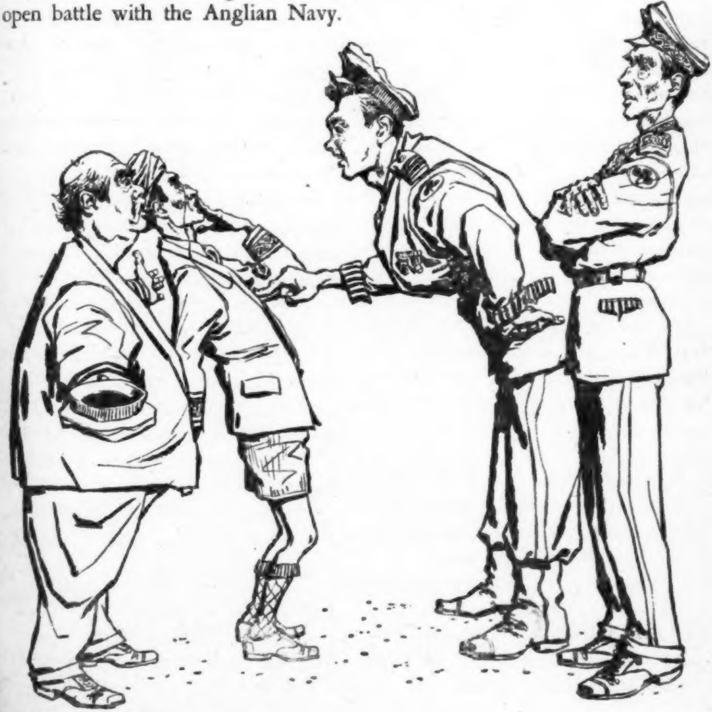
"Vat ban all dis monkeyshining anyvay?" demanded Herr Syrup.

"Why, 'tis simple enough, 'tis," said the major. "Ye're well aware the rare earth praseodymium has hoigh value, since 'tis iv crithical importhance to a geegee injin. Now the asterhoid—"

"*Ja,* I have read de proclamation. But vy did you have to land here at all? If Erse vants Lois, vy not attack Lois like honest men and not bodder me poor spaceshipper?"

McConnell frowned. " 'Tis that would be the manly dayd," he admitted. "Yit the opposition party, the Gaelic Socialists, may their cowardly souls fry in hell, happen to be in power at home, an' they won't sind the fleet ag'inst Laoighise; for the Anglians have placed heavy guard on it, in case iv jist such a frontal assault, an' that base act iv aggression holds our Republic in check, for it shall nivver be said we were the first to start a war."

He tilted the flask to his lips again and embarked on a lengthy harangue. Herr Syrup extracted from this that the Shamrock League, the other important political party in the Erse Cluster, favored a more vigorous foreign policy; though its chiefs would also not have agreed to an open battle with the Anglian Navy. However, Scourge-of-the-Sassenach O'Toole was an extremist politician even for the League. He gathered men, weapons, and equipment, and set out unbeknownst to all on his own venture. His idea was first to occupy Grendel. This had been done without opposition; armed authority here consisted of one elderly constable with a truncheon. Of course, it was vital to keep the occupation unknown to the rest of the universe, since the Shamrock League Irredentist Expedi-



tionary Force could not hope to fight off even a single gunboat sent from any regular fleet. The arrival of the *Mercury Girl* and the chance thus presented to announce a quarantine, was being celebrated up and down the inns of Grendel as unquestionably due to the personal intervention of good St. Patrick.

As for the longer-range scheme—oh, yes, the plan. Well, like most terraformed asteroids, Grendel had only a minimal gyrogravitic unit, powerful enough to give it a twenty-four hour rotational period—originally the little world had spun around once in three hours, which played the very devil with tea time—and an atmosphere-retaining surface field of 930 cm/sec^2. Maintaining that much attraction, warming up the iron mass enough to compensate for the sun's remoteness, and supplying electricity to the colonists, was as much as the Grendelian atomic-energy plant could do.

O'Toole's boys had brought along a geegee of awesome dimensions. Installed at the center of mass and set to repulsor-beam, this one would be able to move the entire planetoid from its orbit.

"Move it ag'inst Laoighise!" cried McConnell. "An' we've heavy artillery mounted, too. Ah, what think ye iv that, me bhoy? How long do ye think the Anglian Navy will stand up ag'inst a warcraft iv this size? Eh? Ha, ha! Drink to the successful defense iv Gaelic roights ag'inst wanton an' unprovoked aggression!"

"I t'ink maybe de Anglian Navy vait yust long enough to shoot two, t'ree atomic shells at you and den land de marines," said Herr Syrup dubiously.

"Shell their own people livin' here?" answered McConnell. "No, ayven the Sassenach are not that grisly. There'll not be a thing they can do but retire from the scene in all their ignominy. An' faith, whin we rethurn home wi' poor auld lost Laoighise an' put her into her roightful orbit with the ither Erse Cluster worlds—"

"I t'ought her orbit vas orig'inally not de same as eider vun of your nations."

"Exactly, sor. For the first toime since the Creation, Laoighise will be sailin' where the Creator intinded. Well, then, all Erse will rise to support us, the craven Gælic Socialist cabinet will fall an' the tide iv victory sweep the Shamrock League to its proper place iv government an' your humble servant to the Ministhry iv Asthronautics, fwhich same portfolio Premier-to-be O'Toole has promised me for me help. An' thin ye'll see Erse argosies plyin' the deeps iv space as nivver before in histhory—an' me the skipper iv the half iv 'em!"

"Gud bevare's," said Herr Syrup.

McConnell rose with a bearlike bow at Emily, who had recovered enough composure to return into sight. "Iv course, Grendel will thin be returned to Anglia," he said. "But her wan foinest threasure she'll not bring home, a Stuart rose plucked to brighten a field iv shamrocks."

The girl lifted a brow and said coldly: "Do I understand, major, that you wish to keep me forever as a shield against the Anglian Navy?"

McConnell flushed. " 'Tis the necessity iv so usin' your people that hurts ivry true Erse soul," he said, "an' be sure if it were not certain that no harm could come to the civilians here, we'd nivver have embarked on the adventure." He brightened. "An' faith, is it not well we did, since it has given me the soight iv your swate face?"

Emily turned her back and stamped one little foot.

"Also your swate legs," continued McConnell blandly, "an' your swate . . . er— Drink, Mr. Syrup, drink up wi' me to the roightin iv wrongs an' the succorin' iv the disthressed!"

"Like me," mumbled the engineer.

The girl whirled about. "But people will be hurt!" she cried. "Don't you understand? I've tried and tried to explain to you, my father's tried, everyone on Grendel has and none of you will listen! It's been forty years since our nations were last close enough together to have much contact. I mean, you just don't know how the situation has changed in Anglia. You think you can steal Lois, and our government will swallow a *fait accompli* rather than start a war . . . the way yours did when we first took it. But ours won't! Old King James died ten years ago. King Charles is a young man—a fire-eater—and the P.M. claims descent from Sir Winston Churchill—they won't accept it! I mean to say, your government will either have to repudiate you and give Lois back, or there'll be an interplanetary war!"

"Oi think not, acushla, Oi think not," said McConnell. "Ye mustn't throuble your pretty head about these things."

"I t'ink maybe she ban right," said Herr Syrup. "I ban in Anglia often times."

"Well, if the Sassenach wants a foight," said McConnell merrily, "a foight we'll give thim!"

"But you'll kill so many innocent people," protested Emily. "Why, a bomb could destroy the Greek theater on Scotia! And all for what? A little money and a mountain of pride!"

"Ja, you ruin mine pizznizz," croaked Sarmishkidu.

"And mine. My whole ship," said Herr Syrup, almost tearfully.

"Oh, now, now, now, man, ye at least should not be thryin' to blarney me," said McConnell. "What harm can a six or sivvin wayks holiday here do to yez?"

"Ve ban carrying a load of Brahma bull embryos in exogenetic tanks," said Herr Syrup. "All de time, dose embryos is growing." He banged his mug on the table. "Dey is soon fetuses, by Yudas! Ve have only so much room aboard ship; and it takes time to reach Alamo from here. If ve are held up more dan two, t'ree veeks—"

"Oh, no!" whispered McConnell.

"Ja," said Herr Syrup. "Brahma bull calves all over de place. Ve can-

not possibly carry dem, and dere is a stiff penalty in our contract."

"Well, now." McConnell looked uneasy. "Sure, an' 'tis sorry Oi am, an' afther this affair has all been settled, if yez wish to file a claim for damages at Teamhair Oi am sure the O'Toole government will—Oh, oh." He stopped. "Where did ye say your owners are?"

"Anguklukkakok City, Venus."

"Well—" Major McConnell stared at his toes, rather like a schoolboy caught in the cookie jar. "Well, now, Oi meself think 'twas a good thing the Anguklukkakok Venusians were all converted last century, but truth 'tis, Jiniral O'Toole is prety sthrict an'—"

"I say," broke in Emily, "what's the matter? I mean, if your owners are—"

"Baptists," said Rory McConnell.

"Oh," said Emily in a small voice.

McConnell leaped to his feet. One huge fist crashed on the table so the beer steins leaped. "Well, 'tis sorry Oi am!" he shouted. Sarmishkidu flinched from the noise and folded up his ears. "Oi've no ill will to innyone . . . meself . . . 'tis a dayd done for me counthry, an' . . . an' . . . an' why must all iv yez be turnin' a skylarkin' merry-go into hurt an' harm an' sorrow?"

He stormed toward the exit.

"The score!" thundered Sarmishkidu in his thin, reedy voice. "The score, you unevaluated partial derivative!"

McConnell ripped out his wallet, flung a five-pound note blindly on the floor, and went up the stairs three at a time. The door banged in his wake.

The sun was low when Knud Axel Syrup pedaled a slightly erratic course over the spaceport concrete. He had given the Alt Heidelberg several hours' worth of his business: partly because there was nothing else to do but work his way down the beer list, and partly because Miss Emily Croft—once her tears were dried—was pleasant company, even for a staid old married man from Simmerblle. Not that he cared to listen to her exposition of Duncanite principles, but he had prevailed on her to demonstrate some classical dances. And she had been a sight worth watching, once he overcame his natural disappointment at learning that classical dance included neither bumps nor grinds, and found how to ignore Sarmishkidu's lyre and syrinx accompaniment.

"*Du skal faa min sofacykel naar jeg dr—*" sang Herr Syrup mournfully.

"An' fwhat moight that mane?" asked the green-clad guard posted beneath the *Mercury Girl.*

"*You shall have my old bicycle ven I die,*" translated Herr Syrup, always willing to oblige,

"*You shall have my old bicycle ven I die,*
For de final kilometer
Goes on tandem vit' St. Peter.
You shall have my old bicycle ven I die."

"Oh," said the guard, rather coldly.

Herr Syrup leaned his vehicle against the berth. "Dat is a more modern verse," he explained. "De orig'inal song goes back to de T'irty Years' Var."

"Oh."

"Gustavus Adolphus' troops ban singing it as—" Something told Herr Syrup that his little venture into historical scholarship was not finding a very appreciative audience. He focused, with some slight diffculty, on the battered hull looming above him. "Vy is dere no lights?" he asked. "Is all de crew still in town?"

"Oi don't know fwhat," confessed the guard. His manner thawed; he brought up his rifle and began picking his teeth with the bayonet. " 'Twas a quare thing, begorra. Your skipper, the small wan in the dishcloth hat, was argyfyin' half the day wi' Jiniral O'Toole. At last he was all but thrown out iv headquarthers an' came back here. He found our bhoys jist at the point iv removin' the ship's radjo. Well, now, sor, ye can see how we could not let ye live aboard your ship an' not see-questhrate the apparathus by which ye moight call New Winchester an' bhring the King's bloody sowjers down on our heads. But no, that puir little dark sad man could not be reas'nable, he bagan whoopin' and screamin' for all his crew, an' off he rushed at the head iv 'em. Now I ask ye, sor, is that inny way to—"

Knud Axel Syrup scowled, fished out his pipe, and tamped it full with a calloused thumb. One could not deny, he thought, Captain Radhakrishnan was normally the mildest of human creatures; but he had his moments. He superheated, yes, that was what he did, he superheated without showing a sign, and then all at once some crucial thing happened and he flashed off in live steam and what resulted thereafter, that was only known to God.

"Heigh-ho," sighed the engineer. "Maybe somevun like me vat is not so excited should go see if dere is any trouble."

He lit his pipe, stuck it under his mustache, and climbed back onto his bicycle. Four roads led out of the spaceport, but one was toward town . . . so, which of three? . . . wait a minute. The crew would presumably not have stampeded quite at random. They would have intended to do something. What? Well, what would send the whole Shamrock League adventure downward and home? Sabotage of their new drive unit. And the asteroid's geegee installations lay down *that* road.

Herr Syrup pedaled quickly off. Twilight fell as he crossed the Cotswold Mountains, all of five hundred meters high, and the gloom in Sherwood Forest was lightened only by his front-wheel lamp. But beyond lay open fields where a smoky blue dusk lingered, enough light to show him farmers' cottages and hayricks and . . . and— He put on a burst of speed.

The *Girl's* crew were on the road, brandishing as wild an assortment of wrenches, mauls, and crowbars as Herr Syrup had ever seen. Half a dozen young Grendelian rustics milled about among them, armed with scythes and pitchforks. The whole band had stopped while Captain Radhakrishnan exhorted a pair of yeomen who had been hoeing a wayside cabbage patch and now leaned stolidly on their tools. As he panted closer, Herr Syrup heard one of them:

"Nay, lad, tha'll no get me to coom."

"But, that is to say, but!" squeaked Captain Radhakrishnan. He jumped up and down, windmilling his arms. The last dayglow flashed off his monocle; it fell from his eye and he popped it back and cried: "Well, but haven't you any courage? All we need to do, don't y' know, is to destroy their geegee and they'll jolly well have to go home. I mean to say, we can do it ten minutes, once we've overcome whatever guards they have posted."

"Posted wi' machine guns," said the farmer.

"Aye," nodded his mate. "An' bross knuckles, Ah'll be boond."

"But where's your patriotism?" shouted Captain Radhakrishnan. "Imitate the action of the tiger! Stiffen the sinews, summon up the blood, disguise fair nature with hard-favour'd rage, and all that sort of thing."

At this point Herr Syrup joined them. You ban crazy?" he demanded.

"Ah." Captain Radhakrishnan turned to him and beamed. "The very man. Come, let's leave these bally caitiffs and proceed."

"But!" wailed Herr Syrup.

His assistant, Mr. Shubbish, nudged him with a tentacle and leered: "I fixed up a Molotov cocktail, chief. Don't worry. We got it made."

There was something in the air, a smell which—Herr Syrup's bulbous nose drank deep. Yes. Irish whisky. The crew must have spent a convivial afternoon with the spaceport sentries. So that explained why they were so eager!

"Miss Croft is right," he muttered. "About visky, anyhow. It calcifies de liver."

He pushed his bicycle along the road, beside Radhakrishnan's babbling commando, and tried to think of something which would turn them back. Eloquence was never his strong point. Could he borrow some telling phrase from the great poets of the past, to recall them to reason? But all that rose into his churning brain was the Death Song of Ragnar Lodhbrok, which consists of phrases like *"Where the swords were whining while they sundered helmets"*—and did not seem to fit his present needs.

Vaguely through dusk and a grove of trees, he saw the terraforming plant. And then the air whirred and a small flier slipped above him. It hung for an instant, then pounced low and fired a machine-gun burst. The racket was unholily loud, and the tracer streamer burned like meteorites.

"Oh, my goodness!" exclaimed Captain Radhakrishnan.

"Wait there!" bawled an amplified

voice. "Wait there an' we'll see fwhat thricks ye're up to, ye Sassenach omadhauns!"

"Eeek," said Mr. Shubbish.

Herr Syrup ascertained that no one had been hit. As the flier landed and disgorged more large Celts than he had thought even a spaceship could hold, he switched off his bicycle lamp and wheeled softly back out of the suddenly quiet and huddled rebel band. Crouched beneath a hedgerow, he heard a lusty bellow:

"An 'fwhat wad ye be a-doin' here, where 'tis forbidden to vinture be order iv the Jiniral?"

"We were just out for a walk," said Captain Radhakrishnan, much subdued.

"Sure, sure. With weapons to catch the fresh air, no doubt."

Herr Syrup stole from the shadows and began to pedal back the way he came. Words drifted after him: "We'll jist see fwhat himself has to say about this donnybrookin', me lads. Throw down your gear! 'Bout face! March!"

Herr Syrup pedaled a little faster. He would do no one any good languishing in the Grendel calaboose and living off mulligan stew.

Not, he thought gloomily, that he was accomplishing much so far.

The asteroid night deepened around him. In this shallow atmosphere the stars burned with wintry brilliance. Jupiter was not many millions of kilometers away, so whitely bright that Grendel's trees cast shadows; you could see the Galilean satellites with the naked eye. A quick green moon stood up over the topplingly close horizon and swung toward Aries: one of the other Anglian asteroids, spinning with its cluster mates around a common center of gravity, along a common resultant orbit. Probably New Winchester itself, maddeningly near. When you looked carefully at the sky, you could identify other little worlds among the constellations. The Erse Republic was still too remote to see without a telescope, but it was steadily sweeping closer; conjunction, two months hence, would bring it within a million kilometers of Anglia.

Herr Syrup, who was a bit of a bookworm, wondered in a wry way what Clausewitz or Halford Mackinder would think of modern astropolitics. Solemn covenants were all very well for countries which stayed put; but if you made a treaty with someone who would be on the other side of the sun next year, you must needs allow for the fact. There were alliances contingent on the phase of a moon and customs unions which existed only on alternate Augusts and—

And none of this was solving a problem which, if unsolved, risked a small but vicious interplanetary war and would most certainly put the *Mercury Girl* and the Alt Heidelberg Rathskeller out of business.

When he re-entered the spaceport, Herr Syrup met a blaze of lights and a bustle of men. Trucks rumbled back and forth, loaded with castings and fittings, sacks of cement and gangs of laborers. The Erse were working around the clock to make Grendel mobile. He dismounted and walked past a sentry, who gave him a suspicious glare, to the berth ladder, and so up to the air lock. He whistled a little tune as he climbed, trying to assure himself that no one could prove he had not merely been out on a spin for his health.

The ship was depressingly large and empty. His footsteps clanged so loud that he jumped, which only made matters worse, and peered nervously into shadowed corners. There was no good reason to stay aboard, he thought; an inn would be more cheerful and he could doubtless get off-season rates; but no, he had been a spaceman too long, one did not leave a ship completely unwatched. He contented himself with appropriating a case of Nashornbräu from the cargo—since the consignee had, after all, refused acceptance—and carried it back to his personal cubbyhole off the engine room.

Claus the crow blinked wicked black eyes at him from the bunk. "*Goddag,*" he said.

"*Goddag,*" said Herr Syrup, startled. To be courteously greeted by Claus was so rare that it was downright ominous.

"*Fanden hade dig!*" yelled the bird. "*Chameau!* Go stuff yourself, you scut! *Vaya a Diablo!*"

"Ah," said Herr Syrup, relieved. "Dat's more like it."

He sat down on the bunk and pried the cap off a bottle and tilted it to his mouth. Claus hopped down and poked a beak in his coat pocket, looking for pretzels. Herr Syrup stroked the crow in an absent-minded way.

He wondered if Claus really was a mutant. Quite possibly. All ships carried a pet or two, cat or parrot or lizard or uglopender, to deal with insects and other small vermin, to test dubious air, and to keep the men company. Claus was the fourth of his space-faring line; there had been radiation, both cosmic and atomic, in his ancestral history. To be sure, Earthside crows had always had a certain ability to talk, but Claus' vocabulary was fantastic and he was constantly adding to it. Also, could chance account for the selectivity which made most of his phrases pure billingsgate?

Well—there was a more urgent question. How to get a message to New Winchester? The *Girl's* radio was carefully gutted. How about making a substitute on the sly, out of spare parts? No, O'Toole was not that kind of dolt, he would have confiscated the spare parts as well, including even the radar.

But let's see, New Winchester was only some thousands of kilometers off. A spark-gap oscillator, powered by the ship's plant, could send an SOS that far, even allowing for the inverse-square enfeeblement of an unbeamed broadcast. It would not be too hard to construct such an oscillator out of ordinary electrical stuff lying around the engine room— But it would take a while. Would O'Toole let Knud Axel Syrup tinker freely, day after day, in the captive ship? He would not.

Unless, of course, there was a legitimate reason to tinker. If there was some *other* job to be done, which Knud Axel Syrup could pretend to be doing while actually making a Marconi broadcaster— Only, there were competent engineers among the Erse. It would be strange if one of them, at least, did not inspect the work aboard the *Girl* from time to time. And such a man could not be told that an oscillator was a dreelsprail for the hypewangle camit.

So. Herr Syrup opened another bottle and recharged his pipe. One thing you must say for the squarehead race, given a trail of logic to follow, they follow it till the sun freezes over. Having mulled the question in his mind for an hour or two, Herr Syrup concluded that he could only get away with building an oscillator if he was in some place where no Erse engineer would come poking an unwelcome nose. So what was needed was an excuse to—

Along about midnight, Herr Syrup left his cabin and went into the engine room. Happily humming, he opened up the internal-field compensator which had so badly misbehaved on the trip down. Hm-m-m, let us see . . . yes, the trouble was there, a burned-out field coil, easily replaced . . . tum-te-tum-te-tum. Herr Syrup installed a coil of impedance calculated to unbalance the circuits. He shorted out two more coils, sprayed a variable condenser lightly with clear plastic, removed a handful of wiring and flushed it down the toilet, and spent an hour opening two big gas-filled rectifier tubes, injecting them with tobacco-juice vapor, and resealing them. Having done which, he returned to his bunk, changed into night clothes, and took a copy of Kant's *"Critique"* off the shelf to read himself to sleep.

"Kraa, kraa, kraa," grumbled Claus. "Bloody foolishness. *Pokker! Ungah, ungah!"*

Inquiry in the morning established that the office of the Erse military commander had been set up in a requisitioned loft room downtown, above Miss Thirkell's Olde Giftie Shoppe. Shuddering his way past a shelf of particularly malignant-looking china dogs, Herr Syrup climbed a circular stair so quaint that he could barely squeeze his way along it. Halfway up, a small round man coming hastily down caromed off his paunch.

"I say!" exclaimed the small man, adjusting his pince-nez indignantly. He picked up his briefcase. *"Would* you mind backing down again and letting me past?"

"Vy don't you back up?" asked Herr Syrup in a harsh mood.

"My dear fellow," said the small man, "the right-of-way in a situation like this has been clearly established by Gooch vs. Torpenhow, Holm Assizes 2098, not to mention—"

Herr Syrup gave up and retreated. "You is a lawyer?" he asked.

"A solicitor? Yes, I have the honor to be Thwickhammer of Stonefriend, Stonefriend, Thwickhammer, Thwickhammer, Thwickhammer, Thwickhammer, and Stonefriend, of Lincoln's Inn. My card, sir." The little man cocked his head. "I say, aren't you one of the spacemen who arrived yesterday?"

"*Ja.* I vas yust going to see about—"

"Don't bother, sir, don't bother. Beasts, that's all these invaders are, beasts with green tunics. When I heard of your crew's arrest, I resolved at once that they should not lack for legal representation, and went to see this O'Toole person. Release them, sir, I demanded, release them this instant on reasonable bail or I shall be forced to obtain a writ of habeas corpus." Mr. Thwickhammer turned purple. "Do you know what O'Toole told me I could do with such a writ? No, you cannot imagine what he said. He said—"

"I can imagine, *ja,"* interrupted Herr Syrup. Since they were now back in earshot of Miss Thirkell and the china dogs, he was spared explicit details.

"I am afraid your friends will be held in gaol until the end of the occupation," said Mr. Thwickhammer. "Beastly, sir. I have assured myself that the conditions of detention are not unduly uncomfortable, but really . . . I must say—!" He bowed. "Good day, sir."

Miss Thirkell looked wistfully at Herr Syrup, across the length of her deserted shoppe, and said: "If you don't care for one of the little dogs, sir, I have some nice lampshades with 'Souvenir of Grendal' and a copy of 'Trees' printed on them."

"No, t'ank you yust de same," said Herr Syrup, and went quickly back upstairs. The thought of what an ax could do among all those Dresden shepherdesses and clock-bellied Venuses made him sympathize with his remote ancestors' practice of going berserk.

A sentry outside the office was leaning out the window, admiring Grendel's young ladies as they tripped by in their brief light dresses under a fresh morning breeze. Herr Syrup did not wish to interrupt him, but went quietly through the anteroom and the door beyond.

General Scourge-of-the-Sassenach O'Toole looked up from a heap of papers on his desk. The long face tightened. Finally he clipped: "So there ye are. An' who moight have given ye an appointment?"

"Ja," agreed Herr Syrup, sitting down.

"If 'tis about your spalpeen friends ye've come, waste no toime. Ye'll not see thim released before Laoighise shall be free."

"From de Shannon to de sea?"

"Says the Shan Van Vaught!" roared O'Toole automatically. He caught himself, snapped his mousetrap mouth shut, and glared.

"Er—" Herr Syrup gathered courage and rushed in. "Ve have trouble on our ship. De internal compensator has developed enough bugs to valk avay vit' it. As long as ve is stranded here anyhow, you must let us make repairs."

"Oh, must Oi?" murmured O'Toole, the glint of power in his eye.

"Ja, any distressed ship has got to be let fixed, according to de convention of Luna. You vould not vant it said dat you vas a barbarian violating international law, vould you?"

General O'Toole snarled wordlessly. At last he flung back: "But your crew bhroke the law first, actin' as belligerents whin they was supposed to be neuthrals. Oi've ivry roight to hold thim, accident to their ship or not, whoile the state iv emergency obtains."

Herr Syrup sighed. He had expected no more. "At least you have no sharge against me," he said. "I vas not any place near de trouble last night. So you got to let me repair de damage, no?"

O'Toole thrust a bony jaw at him. "Oi've only your word there's inny damage at all."

"I knew you vould t'ink dat, so before I come here I asked your shief gyronics enshiner vould he please to look at our compensator and sheck it himself." Herr Syrup unfolded a sheet of S.L.I.E.F. letterhead from his pocket. "He gave me dis."

O'Toole squinted at the green paper and read:

> TO WHOM IT MAY CONCERN:
>
> This is to say that I have inspected the internal field compensator of I/S *Mercury Girl* and made every test known to man. I certify that I have never seen any piece of apparatus so deranged. I further certify as my considered opinion that the devil has got into it and only Father Kelly can make the necessary repairs.
>
> Shamus O'Banion
> Col., Eng., S.L.I.E.F.

"Hm-m-m," said O'Toole. "Well, Yiss."

"You realize I must take de ship up and put her in orbit outside Grendel's geegee field," said Herr Syrup. "I vill need free-fall conditions to test and calibrate my repairs."

"Yiss!" O'Toole's arm shot out till his accusing finger was almost in the Dane's mustache. "Let ye take the ship aloft so ye can sail it clear to New Winchester!"

Herr Syrup suppressed an impulse to bite. "I expect you vill put a guard aboard," he said. "Yust some dumb soldier vat does not know enough about technics to be of any use to you down here."

"Hm-m-m," said O'Toole. He gave the other man a malevolent glance. "'Tis nothin' but throuble Oi've had wi' the lot iv yez," he complained, "an' sure Oi am in me heart ye're plottin' to make more. No, I'll not let ye do it. By the brogans iv Brian Boru, here on the ground ye stay!"

Herr Syrup shrugged. "Vell," he said, "if you vant all de Solar System to know later on how you vas breaking de Lunar Convention and not letting a poor old spaceman fix his ship like de law says he is entitled to . . . *ja,* I guess maybe de Erse Republic does not care vat odder countries t'ink about its civilization."

"The divvil take ye for a hair-splittin' wretch!" howled O'Toole. "Sit there. Wait roight here, me foine lad, an' if 'tis space law ye want, thin space law ye'll git!"

His finger stabbed the desk communicator buttons. "I want Captain Flanahan . . . No, no, no, ye leatherhead, I mean *Captain* Flanahan, the captain iv the Shamrock League Irredentist Expeditionary Force's ship *Dies I.R.A.!"*

After an interchange of Gaelic, O'Toole snapped off the communicator and gave Herr Syrup a triumphant look. "Oi've checked the space law," he growled. "'Tis true ye're intitled to put your vessel in orbit if that's needful for your repairs. But Oi'm allowed to place a guard aboard her to protect our own legitimate intherests; an' the guard is intitled not to hazard his life in an undermanned ship. Espicially whin Oi legally can an' will take the precaution iv impoundin' all the lifeboats an' propulsive units an' radjos off the spacesuits, as well as the ship's radjo an' radar which Oi have already got. So by the law, Oi cannot allow ye to lift with me guardsman aboard unliss ye've a crew iv at least three. An' your own crew is all in pokey, where Oi'm intitled to kape thim till the conclusion iv hostilities! Ha, ha,- Mr. Space Lawyer, an' how do ye loike that?"

Herr Syrup leaned his bicycle against the wall of the Alt Heidelberg and clumped downstairs. Sarmishkidu von Himmelschmidt hitched up his leather shorts and undulated to meet the guest. *"Grüss Gott,"* he piped. "Und vat vill ve haff to trink today?"

"Potassium-40 cyanide on de rocks," said the engineer moodily, lowering himself to a bench. "Unless you can find me a pair of spacemen."

"Vot for?" asked the Martian, drawing two mugs and sitting down.

Herr Syrup explained. Since he had to trust somebody somewhere along the line, he assumed Sarmishkidu would not blab what the real plan was, to construct a spark-gap transmitter and signal King Charles.

"Ach!" whistled the innkeeper. "So! So you iss actually trying to do somet'ings about dis zituation vat iss mine pizznizz about to ruin." In a burst of sentiment, he cried out: "I zalute you, Herr Syrup; You iss such a hero, I do not charge you for dis vun beer!"

"T'anks," snapped the Dane. "And now tell me vere to find two men I can use."

"Hm-m-m. Now that is somewhat less susceptible to logical analysis." Sarmishkidu rubbed his nose with an odd tentacle. "It is truistic that we must axiomatize the problem. So, imprimis, there are no qualified Anglian spacemen on Grendel at the moment. The interasteroid lines all maintain their headquarters elsewhere. Secundus, while there are no active collaborationist elements in the population, the nature of its distribution in n-dimensional psychomathematical phase space implies that there would be considerable difficulty in finding suitable units of humanity, dH. The people of Grendel tend to be either stolid farmers, mechanics, *und so weiter,* brave enough but too unimaginative to see the opportunities in your scheme, or else tourist-facility keepers whose lives have hardly qualified them to take risks. Those persons with enough fire and flexibility to be of use to you would probably lack discretion and might blurt out—"

"Ja, ja, ja," said Herr Syrup. "But dere are still several t'ousand people on dis asteroid. Among dem all dere must be some ready and able to, uh, strike a blow for freedom."

"I am!" cried a clear young voice at the door, and Emily Croft tripped down the stairs trailing vine leaves.

Herr Syrup started. "Vat are you doing here?" he asked.

"I saw your bicycle outside," said the girl, "and, well, you were so sympathetic yesterday that I wanted to—" She hesitated, looking down at her small sandaled feet and biting a piquantly curved lip. "I mean, maybe you were spreading pumpernickel with that awful Limburger cheese instead of achieving glowing health with dried prunes and other natural foods, but you were so nice about encouraging me to show you classical dance that I thought—"

Herr Syrup's pale eyes traveled up and down an assemblage of second through fifth order curves which, while a bit on the slender side of his own preferences, was far and away the most attractive sight he had encountered for a good many millions of kilometers. "*Ja,*" he said kindly, "I am interested in such t'ings and I hope you vill show me more—Ahem!" He blushed. Emily blushed. "I mean to say, Miss Croft, I have seldom seen so much— Vell, anyhow, later on, sure. But now please to run along. I have got to talk secrets vit' Herr von Himmelschmidt."

Emily quivered. "I heard what you said," she whispered, large-eyed.

"You mean about making Grendel free?" asked Herr Syrup hopefully.

His hopes were fulfilled. She quivered again. "Yes! Oh, but do you think, do you really think you can?"

He puffed himself and blew out his mustache. "*Ja,* I t'ink dere is a shanse." He buffed his nails, looked at them critically, and buffed them some more. "I have my met'ods," he said in his most mysterious accent.

"Oh, but that's wonderful!" caroled Emily, dancing over to take his arm. She put her face to his ear. "What can I do?" she breathed.

"Vat? You? Vy, you yust vait and—"

"Oh, no! Honestly! I mean to say, Mr. Syrup, I know all about spies and, and revolutions and interplanetary conspiracies and everything. Why, I found a technical error in 'The Bride of the Spider' and wrote to the author about it and he wrote back the nicest letter admitting I was right and he hadn't read the book I cited. There was this old chap, you see, and this young chap, and the old chap had invented a death ray—"

"Look," said Herr Syrup, "ve is not got any deat' rays to vorry about. Ve have yust got somet'ing to do vat should not be known to very many folk before ve do it. Now you run on home and vait till it is all over vit'."

Emily clouded up. She sniffed a tiny sniff. "You don't think I can be trusted," she accused.

"Vy, I never said dat, I only said—"

"You're just like all the rest." She bent her golden head and dabbed at her eyes. "All of you. You either call me crazy, and try to force things on me to calcify my liver, or you . . . you let me go on, I mean making a perfect ass of myself—"

"I never said you vas a perfect ass!" shouted Herr Syrup. He paused and reflected a moment. "Aldough," he murmured, "you do . . ."

" . . . And laugh at me behind my back, and, and, and uh-h-h-h!" Emily took her face out of her hands, swallowed, sniffled, and turned drooping toward the stairs. "Never mind," she said disconsolately. "I'll go, I know I bother you, I mean to say I'm sorry I do."

"But . . . *pokker,* Miss Croft, I vas only—"

"One moment," squeaked Sarmishkidu. "Please! Wait a short interval of time dT, please, I have an idea."

"Yes?" Emily pirouetted, smiling like sunshine through rain.

"I think," said Sarmishkidu, "we will do well to take the young lady into our confidence. Her discretion may not be infinite but her patriotism will superimpose caution. And, while she has not unduly encouraged any young men of Grendel during the period of my residence here, I am sure she must be far better acquainted with a far larger circle thereof than foreigners like you and me could ever hope to become. She can recommend whom you should approach with your plan. Iss dot not goot?"

"By Yudas, *ja!*" exclaimed Herr Syrup. "I am sorry, Miss Croft. You really can help us. Sit down and have a glass of pure spring vater on me."

Emily listened raptly as he unfolded his scheme. At the end, she sprang to her feet, threw herself onto Herr Syrup's lap, and embraced him heartily.

"Hoy!" he said, grabbing his pipe as it fell and brushing hot coals off his jacket. "Hey, dis is lots of fun, but—"

"You have your crew right here already, you old silly," the girl told him. "Me."

"You?"

"And Herr von Himmelschmidt, of course." Emily beamed at the Martian.

"Eep!" said Sarmishkidu in horror.

Emily bounced back to her feet. "But of course!" she warbled. "Of course! Don't you see it! You can't get really-truly spacemen anyway, I mean a garageman or a chef couldn't help you in your real work, so why let the secret go further than it has already? I mean, dear old Sarmishkidu and I could hand you your spanner and your ape wrench and your abacus or whatever that long thin calculating thing is called, just as well as Mr. Groggins down at the sweet shop, and if there are any secret messages, why, we can talk to each other in Attic Greek. And I do make tea competently, Mum admits it, even though I never drink tea myself because it tans the kidneys or something, and I can take along some dried apricots and bananas and apples for myself and won't that terrible Major McConnell be just furious when he sees how we outsmarted him! Maybe then he will understand what all that whisky and bacon is doing to his brain, and will stop doing it and exercise himself in classical dance, because he really is quite graceful, don't you know—"

"Ooooh!" said Sarmishkidu. "No, wait, wait, wait, ach, vait chust ein moment! Ve iss not qvalified spacemens anyhow so der O'Toole does not accept us for a crew."

"I t'ought dat over," said Herr Syrup, "and shecked in de law books to make sure. In an emergency like dis, de highest ranking officer available, me, can deputize noncertified personnel, and dey vill have regular spacemen's standing vile de situation lasts. O'Toole vill eider have to let me raise ship vit' you two or else release two of my shipmates."

"Then you will take us along?" pounced Emily.

Herr Syrup shrugged. He might as well have a crew worth looking at. "Sure," he said. "You is velcome."

Sarmishkidu rolled his eyes uneasily. "Better I stay on de ground. I got mine pizznizz to look after."

"Oh, nonsense!" said Emily. "If I go, we just about have to have a Martian for a chaperone, not that I don't trust Mr. Syrup because he really is a sweet old gentleman . . . oh, I'm sorry, Mr. Syrup, I didn't mean to make you wince . . . well, I mean to say, of course I'll have to go aboard without letting Father know or he would forbid me, but why distress the old dear afterward with the thought that even if I liberated Grendel I compromised my reputation? I mean, he is the vicar, you know, and it's been hard enough for him, my bringing home Duncanite teachings from Miss Carruthers' Select School for Young Ladies on Wilberforce. Though I didn't learn about it in class but from a lecture in the town hall which I happened to attend, and— And your tavern business, Mr. Sarmishkidu, isn't worth tuppence if we don't get rid of the Erse before vacation season begins, so won't you please come, there's a dear, or else I'll ask all my young men friends never to come in here again."

Sarmishkidu groaned.

Herr Syrup halted his bicycle and Herr von Himmelschmidt untied his tentacles from around the baggage rack. A small bright sun shone through small bright clouds on Grendel's spaceport, the air blew soft and sweet, and even the old *Mercury Girl* looked a trifle less discouraged than usual. Not far away a truckload of Erse soldiers was bowling toward the geegee site to work, and however much one desired to throw them off this planetoid, one had to admit their young voices soared miraculously sweet.

". . .*Ochone! Ochone! the men of Ulster cry.*

Ochone! Ochone! The lords an' ladies weepin'!

Dear, dear the man that nivver, nivver more shall be. Hoy, there, Paddy, see the colleen, ah, the brave broight soight iv her, whee-ee-whee-ew!"

The sentry at the ship berth slanted his rifle across Herr Syrup's path. "Halt," he said.

"Vat?" asked the engineer.

"Or Oi shoot," explained the guard earnestly.

"Vat is dis?" protested Herr Syrup. "I got a right on my own ship. I got de Sheneral's written permission, by yiminy, to take her up."

"That's as may be," said the guard, hefting his weapon, "but Oi've me ordhers too, which is that ye're not trusted an' ye don't go aboard till your full crew *an'* the riprysintative iv the Shamrock League is here."

"Oh, vell, if dat is all," said Herr Syrup, relieved, "den dere comes Miss Croft now, and I see a Erser beside her, too."

Still trailed by a receding tide of whistles, Emily came with long indignant strides across the concrete. She bore an outsize picnic basket which her green-clad escort kept trying to take from her. She would snatch it from him, stamp her foot, and try to leave him behind. Unfortunately, he was so big that her half-running pace was an easy amble for him.

Sarmishkidu squinted. "By all warped Riemannian space," he said at last, "is that not Major McConnell?"

Herr Syrup's heart hit the ground with a dull thud.

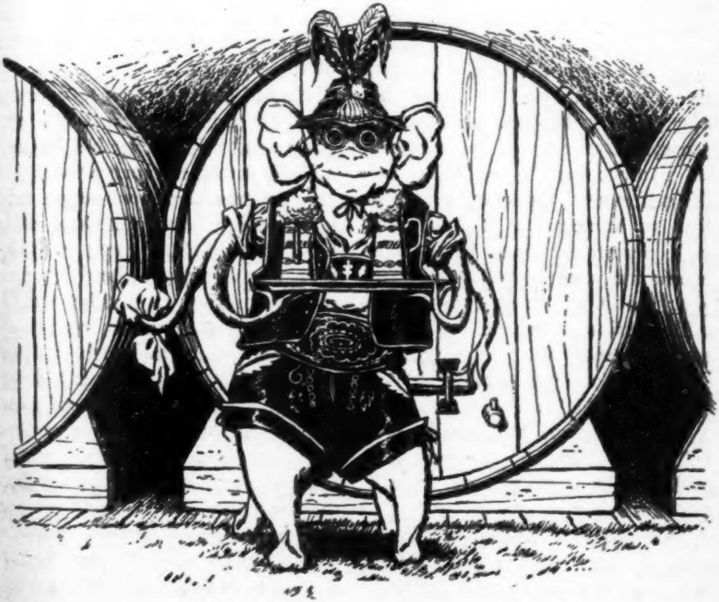
"Ah, there, greetin's an' salutations!" boomed the large young man. "An' accipt me congratulations, sor, on choosin' the loveliest crew which ivver put to sky! Though truth 'tis, she moight be jist a thrifle friendlier. Ah, but wanse up among the stars, who knows fwhat may develop?"

"You don't mean you ban our guard?" choked Herr Syrup.

"Yiss. An' 'tis guardsmanlike Oi look, eh, fwhat?" beamed Rory McConnell, slapping the machine pistol and trench knife holstered at his belt, the tommy gun at his shoulder, and the rifle across his fifty-kilo field pack.

"But you ban needed down here!"

"Not so much, now that we're organized an' work is proceedin' on schedule." McConnell winked. "An



faith, whin Oi heard fwhat crew yez would have, sor, why, Oi knew at wanse where me real obligations lay. For 'tis foive years an' more that me aged mither on Caer Dubh has plagued me to marry, that she may have grandchilder to bhrighten her auld age; so Oi am but doin' iv me filial djuty." He nudged Herr Syrup with a confidential thumb.

When the engineer had been picked up, dusted off, and apologized to, he objected: "But does your shief, O'Toole, know you ban doing dis? I t'ought he vould not like you associating vit' us."

"O'Toole is somewhat iv a fanatic," admitted McConnell, "but he gave me this assoignment whin Oi asked for it. For ye understhand, sor, he is not aisy in the heart iv him, as long as ye are in orbit with inny chance whatsoivver to quare his plans. So 'tis happiest he'll be, the soonest ye've finished your repairs an' returned here. Now Oi am certificated more as a pilot an' navigator than an injineer, but ye well know each department must be able to handle the work iv t'other in emergency, so Oi will be able to give yez skilled assistance in your task. Oi've enough experience in geegees to know exactly fwhat ye're doin'."

"Guk," said Sarmishkidu.

"Fwhat?" asked McConnell.

"I said, 'Guk,'" answered Sarmishkidu in a chill voice, "which was precisely my meaning."

"All aboard!" bawled the Erseman, and went up the berth ladder two rungs at a time.

Emily hung back. "I couldn't do anything about it," she whispered, white-faced. "He just insisted. I mean, I even hit him on the chest as hard as I could, and he grinned, you have to admit he's as strong as Herakles and if he would only study classical dance to improve his gait he would be nearly perfect—" She flushed. "Physically, I mean, of course! But what I wanted to say is, shall we give up our plan?"

"No," said Herr Syrup, glumly, "ve ban committed now. And maybe a shance comes to carry it out. Let's go." He took his bicycle by the seat bar and dragged it up into the ship. No Dane is ever quite himself without a bicycle, though it is not true that all of them sleep with their machines. Fewer than ten per cent do this.

He had been prepared to pilot the *Girl* into orbit himself, which was not beyond his training; but McConnell did it with so expert a touch that even the transition from geegee field to free fall was smooth. Once established in path, Herr Syrup jury-rigged a polarity reverser in the ship's propulsive circuits, to furnish weight again inside the hull. It was against regulations, since it immobilized the drive; and, of course, it lacked the self- adjustment of a true compensator. But this was a meteor-swept region, so there was no danger in floating inert; and, though neither spacemen nor asterites mind weightlessness *per se,* an attractive field always simplifies work. No one who has not toiled in free fall, swatting gobs of molten solder from his face while a mislaid screwdriver bobs off on its own merry way, has experienced the full perversity of matter.

"Ve can turn off de pull ven ve vish to test repairs," said Herr Syrup.

Rory McConnell looked around the crowded engine room and the adjacent workshop. "Oi invy yez this," he said, with a bare touch of wistfulness. "'Tis spaceships are me proper place, an' not all this hellin about wi' guns an' drums."

"Er . . . *ja.*" Herr Syrup hesitated. "Vell, you know, dere is really no reason to bodder you vit' de yob in here. Yust leave me do it alone and . . . hm-m-m—*ja,*" he finished in a blaze of genius, "go talk at Miss Croft."

"Oh, Oi'll be doin' that, all roight," grinned McConnell, "but Oi'd not be dallyin' about all the toime whin anither man was laborin'. No, Oi'll sweat ower that slut iv a machine roight along wi' yez, Pop." He raised one ruddy eyebrow above a wickedly blue sidelong glance. "Also, Oi'll not be makin' iv unsubstantiated accusations, but 'tis conceivable ye moight not work on it yourself at all, at all, if left alone. Some moight even imagine ye . . . oh . . . makin' a radjo to call his bloody majesty. So, jist to kape evil tongues from waggin', we'll retain all electhrical equipment in here, an' here Oi meself will work an' slape. Eh?" He gave Herr Syrup a comradely slap on the back.

"Gott in Himmel!" yelped Sarmishkidu from the passageway outside. "Vot hass exploded in dere?"

An arbitrary pattern of watches had been established to give the *Mercury Girl* some equivalent of night and day. After supper, which she had cooked, Emily Croft wandered up to the bridge while Sarmishkidu was simultaneously washing the dishes and mopping the galley floor. She stood gazing out the viewports for a long time.

Only feebly accelerated by Grendel's weak natural gravity, the ship would take more than a hundred hours to complete one orbit. At this distance, the asteroid filled seven degrees of sky, a clear and lovely half-moon, though only approximately spherical. On the dark part lay tiny twinkles of light, scattered farms and hamlets, the starlit sheen of Lake Alfred the Great. The town, its church on the doll-like edge of naked-eye visibility, its roofs making a ruddy blur, lay serene a bit west of the sunset line: tea time, she thought sentimentally, scones and marmalade before a crackling fire, and Dad and Mum trying not to show their worry about her. Then, dayward, marched the wide sweep of fields and woods under shifting cloud bands, the intense green of the fens, the Cotswolds and rustling Sherwood beyond — Grendel turned slowly against a crystal blackness set with stars, so many and so icily beautiful that she wanted to cry.

When she actually felt tears and saw the vision blur, she bit her lip. Crying wouldn't be British. It wouldn't even be Duncanite. Then she realized that the tears were due to a whiff from Herr Syrup's pipe.

The engineer slipped through the door and closed it behind him. "Hist!" he warned hoarsely.

"Oh, go hist yourself!" snapped the girl. And then, in contrition: "No, I'm sorry. A bad mood. I just don't know what to think."

"*Ja.* I feel I am up in an alley myselfs."

"Maybe it's the water aboard ship. It's tanked, isn't it? I mean, it doesn't come bubbling up from some mossy spring, does it?"

"No."

"I thought not. I guess that's it. I mean, why I feel so mixed up inside, all sad and yet not really sad. Do you know what I mean? I'm afraid I don't myself."

"Miss Croft," said Herr Syrup, "ve is in trouble."

"Oh. You mean about Ro . . . about Major McConnell?"

"*Ja.* He has taken inventory of everyt'ing aboard. He has stowed all de electric stuffs in a cabinet vich he has locked, and he has de key himself. How are ve going to make a broadcaster now?"

"Oh, that Major McConnell!" cried Emily.

"Dere is a hope I can see," said Herr Syrup. "It vill depend on you."

"Oh!" Emily brightened. "Why, how wonderful! I mean, I was afraid it would be so dull, just waiting for you to— And I'm sorry to say it, but the ship is not very æsthetic, I mean there's just white paint and all those clocks and dials and thingummies and really, I haven't found any books except things like 'The Jovian Intersatellite Pilot With Ephemerides' or something else called 'Pictures For Men,' where the women aren't in classical poses at all, I mean it's—" She broke off, confused. "Where was I? Oh, yes, you wanted me to— But that's terrif! I mean, whee!" She jumped up and down, twirled till her tunic stood out horizontally and her wreath tilted askew, and grabbed Herr Syrup's hands. "What can I do? Do you want any secret message translated into Greek?"

"No," said the engineer. "Not yust now. Uh . . . er—" He stared down, blushing, and dug at the carpet with one square-toed boot. "Vell, you see, Miss Croft, if McConnell got distracted from vorking on de compensator . . . if he vas not in de machine shop vit' me very often, and den had his mind on somet'ing else . . . I could pick de lock on de electrics box and sneak out de parts I need and carry on vit' our plan. But, vell, first he must be given some odder interest dat will hold all his attention for several days."

"Oh, dear," said Emily. She laid a finger to her cheek. "Let me think. What is he interested in? Well, he talks a lot about spaceships, he wants to be an interplanetary explorer when this trouble is over, and, you know, he really is enthusiastic about that, why, he's so much like a little boy I want to rumple his hair—" She stopped, gulping. "No. That won't do. I mean, the only person here who can talk to him about spaceships is yourself."

"I am afraid I am not yust exactly his type," said Herr Syrup in an elaborate tone.

"I mean, *you* can't keep him distracted, because you're the one we want to have working behind his back," said Emily. "Let me see, what else? Yes, I believe Major McConnell mentioned being fond of poker. It's a card game, you know. And Mr. Sarmishkidu is very interested in, uh, permutations. So maybe they could—"

"I am afraid Sarmishkidu is not yust exactly his type eider." Herr Syrup frowned. "For a young lady vat is so mad vit' dat crazy Erser, you ban spending a lot of time vit' him to know his tastes so vell."

Emily's face heated up. "Don't you call me a collaborationist!" she shouted. "Why, when the invaders first landed I put on a Phrygian liberty cap and went around with a flag calling on all our men to follow me and drive them off. And nobody did. They said they had nothing more powerful than a few shotguns. As if that made any difference!"

"It does make some difference," said Herr Syrup placatingly.

"But as for seeing Major McConnell since, why, how could I help it? I mean, O'Toole made him the liaison officer for us Grendelians, because even O'Toole must admit that Rory has more charm. And naturally he had to discuss many things with my father, who's one of Grendel's leading citizens, the vicar, you know. And while he was in our house, well, he's a guest even if he is an enemy, and no Croft has been impolite to a guest since Sir Hardman Croft showed a Puritan constable the door in 1657. I mean, it just isn't done. Of course I had to be nice to him. And he does have a lovely soft voice, and any Duncanite appreciates musical qualities, and that doesn't make me a collaborator, because I'd lead an attack on their spaceship this very day if somebody would help me. And if I don't want any of them to get hurt, why, I'm only thinking about their innocent parents and, and sweethearts, and so there!"

"Oh," said Herr Syrup.

His pipe had gone out. He became very busy rekindling it. "Vell, Miss," he said, "in dat case you vill help us out and try to distract de mayor's mind off his work, will you not? It ban your patriotic duty. Yust-encourashe - him - in - a - nice - vay - because - he - is - really - in - love - vit' - you - okay? - goodnight." And hiding his beet-colored face in a cloud of smoke, Herr Syrup bolted.

Emily stared after him. "Why, good heavens," she whispered. "I mean, actually!"

Her eyes traveled back to Grendel and the stars. "But that isn't so," she protested. "It's just what they call blarney. *Makros logos,* to be exact."

No one answered her for a moment, then feet resounded in the companionway and a hearty voice boomed: "Emily, are ye up there?"

"Oh, dear!" exclaimed the girl. She looked around for a mirror, made do with a polished chrome surface, and adjusted her wreath and the yellow hair below it. She must not let a foreigner see an Anglian lady disarrayed, and really, she regretted not having any lipstick and felt sure that abstention from such materials didn't represent the true Duncanism.

Rory McConnell clumped in, his shoulders brushing the door jambs and his head stooped under the lintel. "Ah, macushla, Oi found ye," he said. "Will ye not spake for a bit to a weary man, so he can slape contint? For even the hour or two iv testin Oi've been able to do today on that divvil's machine has revealed nothin' to me but me own bafflement, an' 'tis consolation Oi need."

Emily found herself breathing as hard as if she had run a long distance. *Oh, stop it!* she scolded. *Hyperventilating! No wonder you feel so weak and dizzy.*

The Erseman leaned close. For once he did not grin, he smiled, and it was not fair that a barbarian could have so tender a smile. "Sure an' Oi nivver knew a pulse in inny throat could be that adorable," he murmured.

"Nice weather we're having, isn't it?" said Emily, since nothing else came to mind.

"The wither in space is always noice, though perhaps jist a thrifle monotonous," quirked McConnell. He came around the pilot chair and stood beside her. The red hairs on the back of one hand brushed her bare thigh; she gulped and clung to the chair for support.

After all, her duty was to distract him. She was certain that even Isadora Duncan, the pure and serene, would have approved.

McConnell reached out a long arm and switched off the bridge lights, so that they stood in the soft, drenching radiance of Grendel, among a million stars. " 'Tis enough to make a man belave in destiny," he said.

"It is?" asked Emily. Her voice wobbled, and she berated herself. "I mean, what is?"

"Crossin' space on this mission an' foindin' ye waitin' at the yonder end. For Oi'll admit to yez fwhat Oi've dared say to no wan else, 'tis not importhant to me who owns that silly payce iv ore Laoighise. Oi wint with O'Toole because a McConnell has nivver hung back from inny brave vinture—arragh, how ye wring truth from me which Oi had not ayven admitted to meself!—oh, to be sure, Oi'm proud to do me counthry a service, but Oi cannot think 'tis so great an' holy a dayd as O'Toole prates iv. So Oi came more on impulse than plan, me darlin', an' yit Oi found me destiny. The which is your own swate self."

Emily's heart thumped with unreasonable violence. She clasped her hands tightly to her breast, because one of them had been sneaking toward McConnell's broad paw. "Oh?" she said out of dry lips. "I mean, really?"

"Yiss. An' sorry Oi am that our work disthresses yez. Oi can only hope to make amends later. But Oi trust we'll have fifty or sixty years for that!"

"Er . . . yes," said Emily.

"Fwhat?" roared McConnell. He spun on his heel, laid his hands about her waist, and stared wildly down into her eyes. "Did Oi hear ye say yiss?"

"I . . . I . . . I— No, please listen to me!" wailed Emily, pushing against his chest. "Let go! I mean, all I wanted to say was, if you don't really care how this business comes out, if you really don't think Lois is worth risking a war over and—" She drew a deep breath and tacked a smile on her face. Now was the time to distract him, as Mr. Syrup had requested. "And if you really want to please me, R-r-r-ro . . . Major McConnell, then why don't you help us right now! Just let us make that sparky osculator or whatever it is to call New Winchester for help, and everything will be so nice . . . I mean—"

His hands fell to his sides and his mouth stretched tight. He turned from her, leaned on the instrument board and stared out at the constellations.

"No," he said. "Oi've given me oath to support the Force to the best iv me ability. Did Oi turn on me comrades, there'd be worse than hellfire waitin' for me, there'd be the knowin' iv meself for less than a man."

Emily moistened her lips. There must be some way to distract him, she thought frantically. That beautiful lady agent in "The Son of the Spider," the one who lured Sir Frederic Banton up to her apartment while the Octopus stole the secret papers from his office— She stood frozen among thunders, unable to bring herself to it, until another memory came, some pictures of an accidental atomic explosion on Callisto and its aftermath. That sort of thing might be done to little children, deliberately, if there was a war.

She stole up behind McConnell, laid her cheek against his back and her arms around his waist. "Oh, Rory," she said.

"Fwhat?" He spun around again. He was so quick on his feet she didn't have time to let go and was whipped around with him. "Where are ye?" he called.

"Here," she said, picking herself up.

She leaned on his arm—she had never before known a man who could take her whole weight thus without even stirring—and forced her eyes toward his. "Oh, Rory," she tried again.

"What do ye mane?" It was a disquieting surprise that he did not sweep her into his embrace, but stood rigidly and stared.

"Rory," she said. Then, feeling that her conversation was too limited, she got out in a rush of words: "Let's just forget all these awful things. I mean, let's just stay up here and, and, and I'll explain about Duncanism to you and, well, I mean don't go back to the engine room, please!"

He said in a rasp: "So 'tis me ye'd

be kapin' up here whilst auld Syrup does fwhat he will in the stern? An' fwhat do ye offer me besides conversation?"

"Everything!" said Emily, taking an automatic cue from the beautiful lady agent vs. Sir. Frederic; because her own mind felt full of glue and hammers.

"Ivrything, eh?"

Suddenly his arm jerked from beneath her. She fell in a heap. The green-clad body towered above, up and up and *up,* and a voice like gunfire crashed:

"So that's the game, is it? So ye think Oi'd sell the honor iv the McConnells for . . . for— Why, had Oi nown yez for fwhat ye are, Oi'd not have given yez a second look the third toime we met. An' to think Oi wanted yez for the mither iv me sons!"

"No," cried Emily. She sat up, hearing herself call like a stranger across light-years. "No, Rory, when I said everything I didn't mean everything! I just—"

"Nivver mind," he snarled, and went from the bridge. The door cracked shut behind him.

(*To Be Concluded*)

THE ANALYTICAL LABORATORY

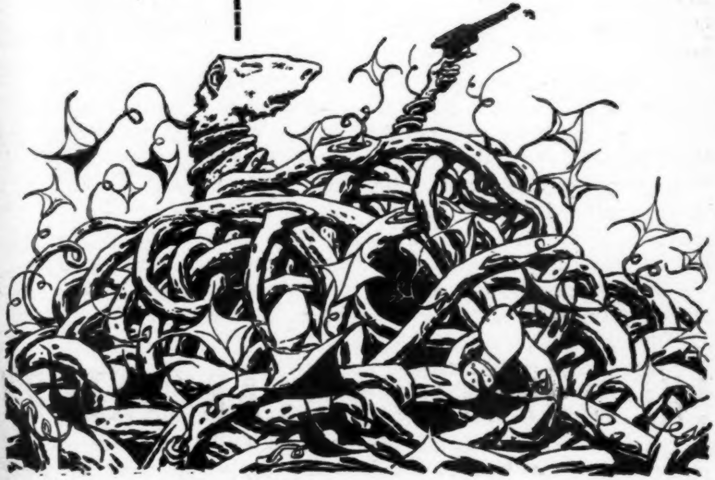
The August issue contained four stories, and the article, so the point-scores run lower this time. Anton Lee Baker's amusing piece "They've Been Working On . . ." was the only actually short story in the issue—and shorts, usually, rate lower than the longer pieces. However, one of the major industrial outfits of the country has asked to reprint that item in their own house magazine; they felt—as did I!—that it's a beautiful little example of what happens when cybernetics and automatic computation are misunderstood and misapplied. There's nothing says you can't run a railroad by computer . . . but not *that* way!

But this is how your reader-votes worked out:

PLACE	STORY	AUTHOR	POINTS
1.	We Have Fed Our Sea (Pt. 1)	Poul Anderson	1.43
2.	Point of Focus	Robert Silverberg	2.13
3.	Cargo For Colony 6	Christopher Anvil	2.82
4.	They've Been Working On . . .	Anton Lee Baker	3.09

THE EDITOR

GOLIATH AND THE BEANSTALK



Illustrated by van Dongen

BY CHRISTOPHER ANVIL

There is an impression that plant life is essentially and inherently peaceful. Yet the oldest truism of life on land is the eternal struggle for a place in the sun . . . which started, of course, among plants.

CORD was lying on the bunk reading over his orders when he felt the rough foreign weave of the fabric at his back pull tight, and then grow loose again. He glanced up.

"Another correction?"

From the bunk overhead, Dave growled, "Yeah. They're rotten navigators. And I think that locker, for the five thousandth time . . ."

Cord glanced around to see the loose-hinged door of the weapons locker swaying back and forth. He got up and slammed it shut again.

The fabric of the upper bunk creaked as Dave craned around. "One of them got out again."

"Where?"

"In the corner, there." He pointed with a bandaged hand. "I hope it isn't armed."

Cord ducked under a suit of battle armor slung on a cable, its arms and legs pulled out tight by wires stretched from deck and bulkheads. In the corner lay a thing like a gray baseball studded with spikes. Cord rolled it carefully into his hands, and carried it back to the weapons locker.

Dave looked in the other direction.

Cord opened the locker door and put the spike-studded ball back in the grenade hopper. He glanced down at the rack of oddly-shaped guns, grenade-throwers, rocket-projectors, and close-quarter weapons.

One of these close-quarter weapons held his attention. It was about the length of a man's arm, and had a hilt like a sword. Five inches back from the point, the double-edged blade branched to form a circle of steel, sharpened inside and out. Sharp-edged teeth jutted from the flat sides of the circle, their points angled back toward the hilt. Where the blade ran back from the circle to join the hilt, there was a guard formed like a basket of knives.

Dave growled, "Shut the door on that thing, will you? Every time I look at it, it makes me mad."

Cord shut the door. "I have to admit it," he said, "it's a heck of a thing to run into in the dark."

Dave growled out a string of white-hot adjectives and lay back.

Cord sat down with his orders and again began to read.

There was a harsh knock at the door.

"Come in," said Cord absently. He realized he'd spoken Terran, and hastily called to mind the Stath equivalent. He called out, "I won't shoot."

There came a rapid snapping of choppy syllables. "My hands are empty. I have a message. You can trust me."

"Enter safely," said Cord, "and leave unhurt."

The door opened. A lithe slender creature about six-and-a half feet tall, with a head like a weasel, came in and looked at Cord with bright eyes. "We approach the alien planet, Observers. The attack can be watched from the bridge. A good view. The Van Chief invites you."

"Thank him for us. We will come with empty hands."

"You can trust us. Fear not for your backs." The Stath hesitated, his sharp eyes focused over Cord's head. "You feud?"

Dave growled, "An accident."

"No offense meant. Can I help?"

"No offense. I have only curiosity on my part."

"Curiosity is the sword of the mind. You have but to ask. I will not betray you."

"What," said Dave, "is that sword with the sharp circle in the blade?"

"Pardon? No offense. I only do not understand."

"There is a weapon in the locker there. It has a guard like a handful of daggers. What's it for?" He dropped off the bunk and opened the locker.

"Oh," said the Stath, "that. I plan no treachery. Let me show you."

"We trust you. Go ahead."

The Shath jerked the weapon out of the locker. With one hand back, he held it in the other like a fencer's foil. He jabbed it rapidly back and forth. "Stab," he said. He turned it edgewise. "Split. Chop." He reached out and yanked back. "Teeth catch. Rip Tear." He raised the blade. "Drop circle over head." His arm made a vicious jerking motion back and forth. "Behead." He returned it to the locker, and grinned like a shark. "You wish to use?"

Cord said hastily, "Many thanks. Regulations forbid it. Besides, we have our own weapons. No offense meant."

"No offense. The beheader is good only for practice to strengthen the wrist. Too clumsy in battle." He bowed and backed toward the door. "We await you at the bridge. Much blood."

"Much blood," said Cord mechanically.

The door closed behind the Stath.

Dave groaned. "Why I ever joined the Reserves, I don't know. Read me the orders again, will you?"

Cord got out the orders and read:

"To Captain, T. S. M. *Terra*. Effective immediately release following for active duty:

"1. Cordell T. Howard, 166-0-8473, 1st Lieutenant, TSNR;

"2. David R. Bancroff, 167-0-1062, 2nd Lieutenant, TSNR.

"These officers are to report immediately by dispatch spacer to Van Chief Stath Invasion Fleet now approaching 61J14, otherwise known as 'Planet of Peace.' They will act as Official Terran Observers. They are to undergo hypnotic foretreatment on board dispatch spacer, and hypnotic aftertreatment upon return. The following additional information is appended:

"61J14 is a system settled several generations ago by Terran humans. In accord with the religio-scientific precepts of the original founders, 61J14 refuses Federation membership, obligations, or protection. 61J14 rebuffs all offers of arms or assistance from us, and states that its policy is 'brotherhood with all races.' The military strength of 61J14 is regarded as negligible. Its sole exports are foodstuffs and botanical novelties. Its sole scientific personnel are apparently biologists and plant specialists.

"The Stath Confederacy is joined with us as signatory to the Triracial Mutual Nonaggression Pact. They have honored this pact rigidly. They would, therefore, probably refrain from attacking 61J14 if, even at this date, it would unite with us. As 61J14 refuses to do this, we must avoid hostilities, or ourselves violate the Nonaggression Pact.

"You are warned to avoid giving aid or comfort to the inhabitants of 61J14, regardless of your natural sympathies. Your sole function is that of observers."

Cord frowned and shrugged into his jacket. He helped Dave into his jacket. They buckled on the heavy gun belts that made the Stath feel more comfortable around them. Then they made their way to the bridge.

The Stath Van Chief was briskly giving last minute orders and general advice to his subordinates.

"Remember now," he said, "these people are not truly enemies, but more like draft animals to be caught, tamed, and set to use. Keep your men in hand. No blood baths without provocation. The thing to remember is, with these people safely under our control, our food worries are over. See to it that no one gets jittery and starts letting off kapa-bombs right and left. The human appearance of these people is not a sign of danger, as they are not armed. A snapperjaw is not dangerous with its teeth pulled out.

"To summarize: There will be no off-planet bombardment. Initial landings will be made at Points 1, 2, 4, and 7. From these points, attack parties will star out to seize communications centers, power plants and the like. The rest of the planet is not sufficiently developed to be worth the trouble. Once total control is established in these regions, we will arrange for permanent administrative personnel to take over.

"Bear in mind—again, please—these people look like humans; but their leaders are religionists and plant-farmers. No overexcitement. Each one *captured* means better food in the future. Each one *killed* is one that can't raise anything for us.

"That's all, gentlemen. Much blood."

The Stath officers all saluted. The Van Chief turned around and saw Cord and Dave. "Ah," he said, brightening, "my hands are emtpy. It is good to see you."

"You can trust us," said Cord, adhering strictly to ritual. "We thank you for the invitation."

"Your backs are safe here," said the Van Chief, in cordial tones. "We're about to go down. I'm afraid it's a dry bone we have to offer you, though. This planet shows no sign of fight."

"Still, we appreciate the honor of being here. We hope we won't be in the way."

"Ah, never, Terrans. We are bound loyally as allies by treaty. Let your knives and ours ever be stuck in the same enemy. Besides, I've given out all the orders, the rest ought to be just routine."

Cord was momentarily at a loss for something to say. He was grateful to see a Stath subordinate approach the Van Chief.

"Sir, the local Chief is on the visor again. The reception's awful, as usual. I don't know what they're using for a transmitter."

"Hm-m-m. Your pardon, Terrans. I leave pleasure for duty. No offense meant."

"No offense," said Cord mechanically. He watched the Van Chief go to a big screen covered with a flickering jumble of murky blurrings.

A voice spoke clearly. "Heretic, are you there?"

The Stath colored slightly. "Control your tongue, toothless one. You lie before us like penned cattle in fear of slaughter. Cause overmuch trouble and your only value to us is lost. There is nothing left to you then but death."

Vaguely, Cord seemed to make out a face on the jumbled screen. The foggy vision of lips parted.

"Few are those who do not die, sooner or later, Heretic."

The Stath scowled, then looked intent. He remarked, "The purpose of life is to live long, otherwise why should there be fear of death? And you shorten your life gravely if you anger me."

"The length of a vine is not important. It is the fruit that counts. Bear in mind: though the days of a long life are many, they are numbered."

"Can a vine shortened by the sword bear much fruit? Why number your days meaninglessly?"

"A good point, Heretic, a good point. There is meaning. We attack no one. We are friendly to all. We devote ourselves to the cultivation of our planet and of ourselves. We have no antagonism toward you. Therefore you must have none toward us."

"We have no antagonism. Nevertheless, you are going to become part of the Stath Confederacy."

"We thank you. But we decline to join."

"This is not something you have anything to say about."

"But it is. Otherwise, you seek to enslave us."

"Put whatever words to it you want. We need food."

"We will trade with you—"

"Bah! Why bargain for the egg when we can have the bird that makes the eggs?"

"We will give you *teaching*. We can show you how to raise—"

"Enough of this chatter. I have heard this all before. My ears ache. If you have anything new to add, say it. Otherwise, you can tell the overseer when you report for work tomorrow."

"I have something new to say. I will say it only once. Listen carefully."

"My ears are up."

"Our beliefs are based on what we believe to be correct metaphysical teachings and precise scientific observations. It is one of our beliefs that a person who sets out to do evil causes himself, as a result, great trouble and hurt. This may take a short time or a long time to appear. Cause-and-effect may be plain or obscure. But once the grinding wheels are set in motion, it takes much to avoid them. We hold no evil intent toward you. We are very sorry that you will, if you land here, bring the punishment upon you. But we will not be slaves. Bombard us from space and kill us if you will. We are not afraid. Perhaps we have that coming to us for past sins. But *do not land here.*"

"Is that it?"

"Yes, that's it. There are some here so benighted that they'd let you come down with no warning. But I adhere to the teachings. You are warned."

The fuzzy image vanished from the screen. The Van Chief turned away with a shake of his head.

"Sir," said an officer urgently, "no offense, but it's time to strap in."

Cord and Dave watched the landings on a huge multiple screen, then went with their host to a prefabricated headquarters building that had been rapidly slapped together.

"On most planets," said the Van Chief, "I would stay with the ship till the enemy was clearly hamstrung and helpless. On this planet, they're helpless to start with. I want to get the administrative machinery set up so we can pull most of the troops out as fast as possible. Cattle fatten best when they're left peacefully in pasture." He looked quizzically at Cord. "It is amazing that these people are—no offense—Terrans like you. Tell me, what would happen if we landed like this on Terra?"

"The chances," said Cord, "are that you would have been—no offense—blown to bits before you got within light-years of Terra."

Dave said nervously, "Isn't the air fresh on this planet?"

Cord looked around. He sniffed the air, then drew a deep breath. The air smelled unusually fresh and clean. The sky overhead was a clear, earthlike blue. The ground, as seen from overhead, was divided into large lush squares, with occasional groups of low buildings interspersed at great intervals. The roads through this flat country ran as straight as if drawn with a ruler. The Stath ships came down near major crossroads. The Stath groundcars were spreading out on these roads in all directions. Light aircraft were being hoisted out of the holds of Stath ships, assembled while woven metal landing strips were staked down, then rolled onto the strips to take off on reconnaissance missions.

The Van Chief was soon surrounded by hurrying officers and message bearers. Cord and Dave had to stand aside, and soon began to feel like surplus baggage. Moreover, they began to realize that they were not really observing anything except hurrying Stath.

The attitude of these Stath subtly began to change. Cord became conscious of furtive measuring glances from some who had formerly been elaborately respectful. Spoken to directly, the Stath were still courteous, but their manner had something tentative about it.

Small numbers of human prisoners were now being brought into camp. The guards prodded them with their guns to hurry them along.

Cord and Dave watched soberly.

When the first of the prisoners were brought in, Cord overheard the remark, "Odd to see a human jump."

Later in the afternoon, a messenger hurried past Cord, stopped, stared, and went on by. Cord heard him say, "It stopped me for a minute to see one wearing guns."

As human prisoners were herded into the camp like cattle, Cord and Dave began to be treated with a courtesy that was overelaborate. As often as not, the respectful phrases were spoken with a smile and slightly lowered lids.

Toward evening, a pair of husky Stath soldiers, carrying guns and smiling dreamily, strolled up to Cord and Dave. They glanced at each other, then looked at Cord and Dave.

"Take off the guns, and get outside with the rest."

Cord glanced at the Van Chief and the group of silent officers around him. Some of these officers were watching openly. Some pretended to be busy. The Van Chief gave no sign of knowing what was going on.

The soldier near Cord reached out to put one hand behind Cord's neck and jerk him forward. The soldier in front of Dave grabbed Dave by the sleeve.

Cord ducked and stepped back.

Dave whipped his arm up and around, breaking the grip on his arm.

The soldiers raised their guns.

There was an echoing double explosion.

The soldier in front of Cord was sprawled on his back. The other soldier had one hand pressed to his shoulder and a look of disbelief on his face.

Dave shot him right through the head.

Cord turned to face the group of Stath officers. The smoking gun in Cord's hand turned with him.

Most of the officers stood perfectly motionless. One made aimless pawing motions with his hands. The Van Chief pretended not to have heard the two deafening explosions, and went on with his work.

Cord broke the archaic gun open, kept his eyes on the Stath, tossed out the hot empty shell, and replaced it with a bullet from his belt. He snapped the gun shut. The click was clearly audible throughout the room. Dave did the same, and still the Stath did not move. The Van Chief continued to be very busy.

Cord smiled and turned to Dave, the gun still pointed in the direction of the Stath.

Cord said, "You know, Dave, I believe those soldiers must have taken us for local inhabitants."

"Probably no offense was meant,"

said Dave, his gun aimed at the Van Chief's busy profile.

"In that case," said Cord slowly, "I suppose we shouldn't take offense, either."

"No," said Dave reluctantly. "No, I suppose not."

"Well," said Cord, "that does it, then." He shoved the gun back in its holster.

"Yes," said Dave, a little fretfully, "I guess that's all." He hesitated, jammed his gun into the holster, then thoughtfully loosened it a little.

They stood watching the Stath a moment, then turned away together.

A ragged sigh behind them broke the silence in the room.

Until that moment, Cord had acted without being aware of any thought or hesitation at all. Now, between one step and the next, he became conscious of what had just happened. He half-turned, to see the Stath soldier who had reached out for him stretched on his back with his head in a red pool. Cord looked at the base of the soldier's neck, and turned away.

There was a sudden rush of chatter in the room.

Dave said in a low voice, "Did we get that in the hypnotic foretreatment?"

"I don't know. If so, I see why there's an aftertreatment."

The room abruptly fell silent again.

Cord turned around to see a group of strongly-built elderly humans wearing long white cloaks, white trousers, and white sandals, and carrying in their raised right hands highly-polished black staffs about two-and-one-half feet long.

The Van Chief said angrily, "Throw those humans out of here. A subchief can talk to them tomorrow morning."

A crowd of soldiers, bristling with guns, was packed in the doorway. At the words, "Throw those humans out," a number of these soldiers started for Cord and Dave, whose guns instantaneously appeared in their hands. As if by magic, there was a cluster of yelling Stath officers between the two Terran observers and the rushing soldiers. These officers were dancing up and down, shouting, "No, no! Not these! The *tame* humans!"

The "tame humans" were reaching out with their black staffs, smashing soldiers alongside the neck, in the belly, and in upthrusting jabs to the chin. The wave of rushing soldiers reeled back and broke apart into howling individuals clutching their heads, stomachs, knees, and groin.

Above the tumult was the regretful voice of one of the elders, saying, "Well, well, it's too late now. We tried to warn them, but they wouldn't listen. So be it. *Break the sticks!*"

The second wave of soldiers had the black staffs broken over their heads.

There was a puff from one of the staffs like a cloud of spores from a punctured puffball. Clarity of vision vanished in a murky gloom. In an instant of silence, there was a noise like a stream of marbles hitting the floor. Then a sound like a strewn handful of sand.

A choking yellow vapor spread over the room.

The Van Chief's voice, loud and carrying, commanded, "Kill the lot of them!"

There was a reverberating roar and the whistle of flying projectiles, Bright flashes lit up here and there in the darkness.

Cord dove for the floor, crawled to the wall, worked his way along it to the edge of a door frame and pulled himself out and down the steps.

Around him, there was shouting and confusion. A powerful voice roared out over the din:

CAST THE SEED!

There was a sort of low, continuous, sprinkling sound, then several voices shouted, "Run for it!"

Cord realized suddenly that all this had been in Terran.

Dave's voice said at his elbow, "Now what the devil do we do?"

"I think we'd better get out of here."

They started inching their way forward.

A thing like a delicate thread looped around Cord's foot. He jerked his foot loose. A slender cord coiled around his ankle.

He stumbled forward, caught his balance, yanked his foot free, and strode ahead.

A length of stiff wire caught his foot and threw him headlong onto the ground.

He jerked loose, got his legs under him and ran as fast as he could.

He tripped over a cable stretched along the ground, got to his feet, and heard Dave shout, "Cord, *look out!*"

There was a tearing sound.

Something spiraled up his leg.

A vague human form went past Cord like a rocket out of its launcher.

The something around Cord's leg thickened from a hair to a thread to a wire to—

He let out a yell, jerked his leg with all his strength, threw himself forward—

There was a springy yielding of the thing that held him. It thickened and began to tighten. Something looped around his waist.

He sucked in his breath.

He jerked, twisted, and strained till the blood pounded in his head and roared in his ears.

There was a ripping noise and he staggered backwards. He was free.

He dragged in for a breath of air and bolted through the gloom, jerking free of the fine tendrils as they looped around him, stumbling to his feet after every fall over the thick ropy trunks that sprawled along the ground.

At last he became aware that there was plowed ground under his feet. He stood still, breathing hard. There was a faint sound nearby. A hand ran over his face.

A voice said in Terran, "Human. O.K. This way."

Cord walked a little distance, then

sank down on the yielding earth. He thought it was the softest bed he'd ever slept on.

He came to see stars fading overhead.

He felt cold, cramped, and stiff. A stone was digging into his side. He got to his feet.

Dim forms were moving here and there around him.

Cord felt like a mass of bruises from head to foot.

In the distance, a fire was blazing bright. Cord went to it, found it surrounded by men stretched out with their feet to the fire. He warmed himself, got sleepy, lay down, and was shaken awake again in full daylight.

Dave's bruised face confronted him.

"Sorry," said Cord. He eased himself gingerly to his feet. The horizon tipped and swayed around him. "Merciful God," he said.

Dave gripped his arm. The world steadied and Dave's voice came to him. "You'd better take a look at it, Cord. Words won't do it justice."

Cord took a deep breath and followed Dave.

They came to a sort of green mountain rising abruptly out of the earth. Knots of people were standing around looking at it. Dave and Cord stopped near several men in white.

Cord looked at this "mountain" carefully, glanced around and saw with a start that a wide road ran directly into it and disappeared. He looked around. He could see in the distance another road approaching it, and another.

"Get it?" said Dave. "Remember this spot?"

Cord looked up at the greenery. A morning breeze ruffled the big leaves. Here was a glint of metal, wrapped in massive twining trunks. There was a fist of coiled vines about six feet long, with feet sticking out one end and a weasellike head sticking out the other.

One of the white-cloaked men nearby remarked, "Well, we've got this to go through again."

"It's a fearful drain on the soil."

"Can't be helped. One thing just leads to another and—"

"Well, that's life. It's a judgment."

"Amen."

"Amen."

"Time to get back to work. We can't stand around all day doing nothing but talk."

Cord and Dave looked at each other. They looked around at the green inviting world. Everything was neat and tidy. There wasn't a menace in it anywhere. The little knots of men were moving away.

Cord and Dave looked at the mountain.

Cord cleared his throat and spoke gently.

"No offense," he said.

THE END

STIMULUS

BY ANDREW SALMOND

It is a good and beneficial thing to kick an inferior in the teeth, rob him of his natural rights in the Universe, and cripple his future hopes. It really is—for the inferior, for the one who is exploited!

Illustrated by Freas

GENERALLY speaking, messages took a long time to catch up with the Major Projects Engineer. His duties were those of an inspector-general, his commission a roving one—and starship receivers were simply not sensitive enough to pick up subetheric transmissions from points much farther away than fifty parsecs.

On top of that, he was a law unto himself where work schedules were concerned. His staff would prepare neat little route programs for him—which he invariably ignored. His consistency in this respect was such that it was possible to build up a kind of negative knowledge of his whereabouts at any given time. For instance, if a query came in to his HQ, *Where's the Chief?* a quick reference to the copy-schedule would indicate, say, that he was supposed to be inspecting Project 723 on Pollux III—so Pollux III would be the last place where anyone would think of trying to locate him.

The Co-ord Council gave him a fairly free hand at running his show. At first they tried hard, very hard, to tie him up in the usual red-tape cocoon, but that phase hadn't lasted long. It finished, in fact, when the main analyzer at Central blew a circuit—for the fifth time running—trying to make sense out of the snarled-up batch of addled statistics which the Engineer had been pleased to term a completed return. Thereafter the Engineer was rarely troubled by the desk-pounders.

But the Council just *had* to know when they could lay their hands on him, metaphorically speaking. So they fixed him with a regulation. This required all star-class personnel to report in person at their HQs at predetermined intervals. It was labeled 'CC—MANDATORY', which meant that failure to comply brought instant and automatic demotion, *sans* appeal.

The Engineer grumbled plenty about that regulation, of course—but he took great care not to contravene it. The climb to top-of-the-shop in Projects had been long and hard, and it would have been insane to risk nullifying all that effort simply for the sake of making a defiant gesture.

Thus did CC know that he'd be on the spot to receive the instructions they'd issued in re the setting-up of a new Project involving the third planet of a G5 star in the Sirian sector.

The Engineer read the coded message twice—the first time hurriedly to get the sense of it, the second time very much less hurriedly to make sense *out* of it.

Clairvoyancy was not, by any stretch of the imagination, his long suit. As a crystal-gazer he'd have starved in a week; as a prophet he made a damn good Engineer. In other words, his esp ability was normal. So he could hardly be blamed for failing to appreciate that execution of the Council's latest order would radically affect the destiny of the Universe.

But if he wasn't able to tweak aside the veil of Time and read between the lines he was most certainly capable of reading what was *on* the lines—and what he read there didn't fill him with high delight. Not at all.

He had his own ideas about what constituted a reasonable Project. On more occasions than he cared to recall his and CC's ideas hadn't meshed. This was another of them—and his reaction was characteristically explosive.

It would be an exaggeration to say that his bellow threatened to splinter the plexiglass windows, crack the pressed-steel wall-panels, and fuse the multi-phase lighting system — but not much of an exaggeration. Undoubtedly the roar was loud, but the probability is high that it would have been barely audible in the immediate vicinity of, say, an atomic detonation.

Goth, his senior assistant, had heard the sound many times before He knew what it generally presaged. When the Engineer blew his top he liked to tell the galaxy about it—in words of not more than two syllables.

This time it took ten minutes for the Engineer's fury to simmer down to mere boiling-point.

"Sheer unadulterated lunacy!" he bellowed. "Complete raving idiocy! How do they get away with it? That's what I want to know. Just how in the name of Mira does Psycho-Center ever manage to get a scheme like this"—he waved the offending flimsy—"moonstruck aberration considered by the Security Committee, let alone approved, and triple-seal approved at that, by the full Co-ord Council?

"Goth, d'you recall that non-compos Project we put in hand on Deneb X six or seven trips ago, when we had to inject new life into a dying religion to mask Survey's bungling? Well, compared with this, that was the cleverest little number we ever—"

He broke off, shaking his head in despair. He laid the flimsy on his desk and thumped on it with his fist. "It's fantastic. And to think that there are still billions of our poor benighted co-citizens who can't figure out why taxes are so high. It's high time they were told the truth." He showed his teeth. "And how I'm going to love telling 'em. Just wait until I'm released from the security oath. I'll give those chairborne planners something to worry about for a change. I'll spill beans by the bucketful. I'll let enough cats out of the bag to populate a planet."

He glanced down at the message chit, and the room again rang with the thunder of his rage. "And by the Corona of Castor I'll most certainly make it widely known that of all the expensive, time-consuming, crack-brained Projects it was my displeasure to direct, this was the zaniest. That, I promise." He screwed the flimsy into a ball, tossed it over to his assistant. "Take a glim, Goth—and weep."

Goth read and agreed and let off some steam of his own. He wasn't merely being sycophantic either. He'd been with Projects almost as long as his chief, and he, too, had seen some of the weirdest schemes imaginable emanate from Psy-Center. But never, he decided, never one quite so crazy as this.

Not that the new Project was unworkable. On the contrary. It could and would be duly executed, with the polished precision of which P-Unit was eminently capable—and justifiably proud. Both engineers knew that.

But that wasn't the point.

The how, the where, the when, were known.

But—the why?

Get on with it, said CC—in effect. *Never mind the why. You might be able to figure it out while you're setting up the Project, but if you do, keep it to yourself. Remember the security oath. Remember the penalties. Don't pry and we won't ride you too hard. Just do as you're told and we'll all be happy. Right?*

But it wasn't *right,* thought the Engineer savagely, *and it never would be right. Far from it.* To have planning and execution kept well apart in separate little vacuum-tight compartments was all very well in theory, but in practice it made for tormenting frustration and—

"What's the use?" The Engineer scowled down at his desk and laid his finger on the green button. "Time's a-wasting. Let's call that shaping conference and get this Project under way and out of the way just as fast as we can—"

He pressed the button . . .

Kessring's fingers were sweaty on the hand-mike. He tried hard, but not very successfully, to keep his voice even.

"She's dropping fast now. Height about a hundred thou'—speed Mach one point seven—position dead over Tycho. Lateral jets seem to be working fine. She had a bit of a wobble after reversal, but it's fading. Not long to go . . ."

He talked on, the pitch of his voice rising quite perceptibly as zero second came nearer. His eyes darted from screen to telemetered dials and back again to screen.

"The libration's gone. She's dropping steady and straight as a needle. The emergency jets should cut in any moment . . . ah, there they blow. Her speed had better fall off fast now—Tycho is mighty close . . .

"Height five hundred, speed safety plus five. In twenty-five seconds she'll be down to as smooth a landing as if she were a B 68 with a hung-up H-Bomb." An exultant note crept into his voice. "This is *it,* Earth—the moment of the century. Second count coming up . . .

" . . . Five, four, three, two, one. She's *there!*" Then, a microsecond later a gasp.

The gasp pulsed across the miles of emptiness, followed by a long pause.

Kessring's voice, husky, tinged with utter stupefaction, cut back into the mush of star-static. "Sugar Eight touched down on Luna at 172436 GMT and blew up on contact with surface." He let the single shocking statement stand by itself for ten seconds, then he said dully, "I'll re-run the slow-speed cine, and call back in thirty minutes. Kessring on Art-Sat Two signing out."

He closed the switch, stood up. His face was gray.

General Dyce took his time over replacing the red receiver on its cradle. For several moments he stood looking at the instrument, not seeing it at all, his right forefinger jabbing absently at the scrambler button. Then he shook his head slightly, sighed, squared his shoulders, and turned to face the men seated at the long table in the wide high-ceilinged room.

He disciplined all expression from his heavy blue-jowled features before he spoke. "Pentagon's just had word from Kessring that S.8 went up in smoke ten minutes ago. Palomar's confirmed the explosion."

The only reaction to his statement was that grave faces grew graver. The news he'd imparted was something his audience had hardly been expecting *not* to hear.

There was no trace of levity in the general's voice as he continued, "So—bang goes another billion." He walked to the table, sat down in the empty chair at the top end. He pulled a cigar from his breast pocket, bit off the end, lit it, swiveled it to the left corner of his mouth. He leaned forward slightly, his hands flat on the table top.

"Right. We won't waste precious time discussing the loss of S.8. That information serves only to treble the necessity for this conference—so let's get down to business." His eyes fixed on a tall balding man seated halfway down the table. "Dr. Valdi, would you care to start the ball rolling?"

The tall man gave a quick jerky nod, cleared his throat, and rose to his feet. He spoke rapidly but with a marked tendency to avoid elisions that indicated English was not his mother tongue.

"For the record, gentlemen, the purpose of this meeting is to investigate the failure of our three S-type rockets, numbers six, seven, and eight, to land safely on the Moon. I feel it would be pointless to recapitulate, since each and every one of you knows all the facts." The reflection of the overhead lights flashed in the lenses of his rimless spectacles as he moved his head in a slow arc from left to right. "What is wanted—urgently—are ideas."

He spread out his hands, palms upwards. "Please do not hesitate to advance any theories you may have, no matter how foolish or far-fetched they may appear to you. The time for diffidence is past"—his lips twisted wryly—"the time for straw-clutching has arrived." He sank back into his seat.

One after another, the men at the table got up and talked.

Time passed. The air in the room grew blue with cigar and pipe smoke.

At the end of three hours, Dyce stood up, looked round the table, and shook his head. "Individually and collectively, you disappoint me." His tone was scathing. "Apparently there isn't one of you who can't give at least half a dozen watertight reasons why the ships should *not* have exploded when they hit Luna. If you're wearing a Sec badge in your lapel, you're five-hundred per cent positive that sabotage can be ruled right out. If you're a slipstick expert, you can produce fifty pages of math to prove that the rockets were completely sound, that the reactors were incapable of blowing their tops."

He scowled, brought his fist down hard on the oak table top. The heavy glass ash tray danced briefly. "But, the facts are plain enough. The ships *did* explode. We still haven't put an unmanned vessel down safely on the Moon. *Why?* Where's the joker?" He paused, let his rhetorical questions sink into the silence. "We've got to find the answer—and soon. For as surely as Luna isn't made of green cheese, all hell is going to break loose when the Appropriations . . . What's the matter, Doc?"

Valdi, had made a sudden, stifled exclamation, and sat bolt upright in his chair.

The physicist opened his mouth and after one or two false starts said shakily, "General, your expression about the composition of our satellite —that is the only possible explanation."

Dyce's eyebrows climbed up his forehead. Then his neck crimsoned, his craggy chin went out, and he barked, "What's that? Green cheese?"

"No." Valdi cut him short, waved an impatient hand. "I mean that we have been following a blind trail. We have satisfied ourselves that there were no flaws in the ships, accidental —or otherwise. Yet the ships, one after the other, exploded on contact with the surface of the Moon. Is it illogical to suggest that we re-examine our ideas concerning *the constitution of our satellite?"*

He paused, pallid in the glow of the fluo-strips, glanced up and down the table. "I can see that most of you have followed my line of thought. And it leads to a conclusion that I hesitate to put into words."

For the space of a dozen heartbeats a strained silence enveloped the room. Dyce was one of the few who did not sense the mental stress-fields which had been created by Valdi's final remarks. He swore under his breath, *Physicists! Cryptic devils, the lot of 'em.* He counted up to ten mentally then snapped, "What do you mean? I still haven't caught on. Let's have it—and no more double-talk."

Valdi looked him straight in the face, and Dyce was startled to observe the expression of utter despondency in the other's eyes. "If my supposition is correct, general, Man will never reach the Moon." His voice was very low. "You have surely heard of . . . see-tee matter?"

This time the general understood the reason for the tension which came into instantaneous existence in the room. The color drained from his face, his fingers tightened involuntarily round the arms of his chair. "Holy smoke!" he breathed, with sudden sick dismay in his heart. "Not—*that!*"

But it was—that.

S.9 went up and out and circled Luna at a hundred miles, and pre-set automatic launchers in the hull ejected loads of heterogeneous ballast—sandbags, scrap metal, rocks—at thirty-minute intervals. D'Aladin on A.S.1 had a ringside seat, and Palomar had its heavies trained, spectros attached.

Twenty harmless, molecularly- and atomically - stable consignments — twenty explosions. Each of them as brilliant as an A-bomb burst; each as searingly significant as the first bow, the first wheel, the first fire—

Short-lived, ultra-hard, ultra-lethal radiation—and a new series of pockmarks on the cratered plains.

Moon was definitely not for Man.

Contra-terrene—c-t—see-tee. Matter with the signs reversed.

Proof of its existence filled in very neatly some rather gaping holes in microphysics theory—but that was a very small consolation. It raised Cain among the cosmogonists. And it gave the *coup de grace* to every hypothesis involving joint Earth-Moon origin that had ever been postulated.

An old, old dream faded into limbo. The S-type rockets were scrapped. They were neither big enough nor powerful enough for the next stage—the forty-million-miles jump.

Ten years elapsed before the backroom boys thought up the theta drive. It took less than ten months to build a ship to house it. It took the ship less than ten days to reach Mars—and return. The Red Planet was—also contra-terrene.

Within a year Man knew the worst. There was not a planet, nor a satellite, nor an asteroid, in the whole wide compass of the Solar System on which Earth ships could land—ever.

The cosmogonists tore their collective hair, searched frantically for new ideas—and new math with which to handle them.

At that stage a lesser race might have given up. But Man had always been a restless, persistent creature, and the stars called, and in an incredibly short space of time a highly-ingenious refinement of the theta drive gave him supercee. Then ships went winging out across the midnight gulfs to Proxima, Procyon, Capella, Sirius—

Not all the ships came back. A see-tee meteor in the Capellan system put paid to one. The overdrive of another failed halfway to 61 Cygni. But those that did return had the same despairing story to tell.

The cosmogonists threw in the towel. It was possible to formulate any number of theories to explain the existence of a solitary normal-matter planet in an otherwise completely see-tee volume of space. The problem—an insuperable one—was to fit any of the theories into the framework of conventional science. (And at the time, no one paid any attention at all to the subject-matter of a plaintive letter published in the correspondence columns of a South American astronomical journal. The writer appealed for information about—meteorites. He alleged that there had been no reports of new meteorites discovered on Terra for several decades, despite the fact that the most impressive meteor displays ever recorded had occurred in that same period).

So—Man pulled in his ships. One by one they came back from the depths. One by one they returned to the only planet that would accept them. One by one they settled forlornly, without fanfares, on the vast landing fields which had been constructed with high optimism when the first starships were launched. And one by one the fields were de-commissioned, and the vessels that were to have opened up the galaxy grew old and rusty on the silent asphalt plains. Fifty years after the S.8 had gone up in supernal splendor on Luna, the *Asgard,* lying quiescent in the void with a crew of dead men a parsec out from 61 Cygni, was the only Earth-ship in space.

It was at the entrance to the spaceport of Zanz, capital of Rigel IV, that the Engineer bumped into the Psychologist. Or, to be more accurate, it was there that the Psychologist located the Engineer. But, at the time, the Engineer didn't know that; to him the meeting was pure chance. He hadn't seen the other for years, and he greeted him with rough, boisterous affection, pounding him on the shoulder, punching him in the biceps, showering him with questions without pausing to listen for answers. Then, as he ran out of breath, his gaze fell on the insignia on the lapels of the Psychologist's cloak.

He did a rapid double-take, his eyebrows shot up comically, and he said in an awed voice. "Whirling galaxies! Top of the shop now, eh?" He whistled. "And, if my memory's not playing me false, you rate a courtesy title—'sire,' is't not?" Then he grinned, stuck his hand out. "Congratulations, Psy Vorgan. You've certainly gone far and fast since we last met."

"Nice of you to say so, chief." The Psychologist tried hard, but not very successfully, to look modest. "But don't run away with the mistaken idea that these gewgaws"—he gestured at the comet badges—"make me one of Psy-Center's big wheels. Haven't you noticed they're silver, not gold?" He tapped himself solemnly on the chest. "Probationer, that's me. Permanent grade's still umpteen missions and twice as many exams distant."

"So the stories I've heard about the tough prob. setup at the Centers weren't apochryphal, after all?" The Engineer pointed a thumb at himself. "I'm thinking it's just as well this character stuck with Projects—he'd never have made the grade. But you'll get by, old friend—I'm certain of that." He glanced at his wrist-chrono. "On a mission now?"

The Psychologist didn't answer immediately, and the Engineer looked up to catch sight of an amused glint in the other's eyes. Immediately suspicion flashed across his mind. He grabbed the Psychologist's sleeve, inquired in a tone not far removed from a bellow, "By the Nebulæ of Nivenon, d'you mean—?"

"Quite," replied Vorgan imperturbably. "Top marks for deduction. You needn't tell all Rigel IV, though." His face creased in a grin. "You didn't really believe this meeting was accidental." He craned his neck to look out over the vast spaceport. "Where's your ship tucked away? At the far end of the field, I suppose?" He glanced back at the Engineer. "Oh, come, come, chief—you can wipe the surprise off your face now. I'm still waiting to hear you say how delighted you are at the prospect of sharing my inimitable company during the next couple of years. Consider the opportunity we'll have for tri-di—"

"The expression on my face," interrupted the Engineer, with a gleeful note in his voice, "is not, I assure you, surprise. It is exultation." He rubbed his hands. "Just think: at long weary last I'm going to have the chance of showing you how matrix chess *should* be played, and also of finding out the whys and the wherefores of some of the Projects that—"

"Hold it." The Psychologist held up his hand. "Pleasure before business. Have we time for a nectra or two before—" He gestured skywards with his thumb— "Or, don't you drink when you're driving?"

"Who—me, sire?" piped the Engineer in a ludicrous falsetto. "Oh,

no, sire—never, sire. Ouch." His breath left him as Vorgan prodded him forcefully in the solar plexus.

"Don't 'sire' me, you loon—and don't kid me either. Come, let us indulge in a celebratory imbibition." Vorgan rolled the expression on his tongue. "Celebratory imbibition. What felicitous coining. Made-to-measure for a sobriety test. Hey, wait for me," he called after the Engineer, who was stalking off purposefully in the direction of the spaceport bar.

Three months passed by. The Engineer continued on his tour of inspection, dropping in on Units orbitting the planets of half a dozen suns; the Psychologist tagged along, asking questions, making notes, offering suggestions. In between, they indulged in mutual reminiscence—and interminable games of dimensional chess. The Engineer won most of them; his ability to visualize clearly in three dimensions more than compensated for his inferiority in subtlety. But at last there came a jump through hyperspace in the course of which the Engineer appeared to lose his grip: the Psychologist beat him with ease three times running—

Vorgan reduced the strength of the diamagnetic field, watched the pieces sink slowly to the base of the matrix. He shot a glance at the Engineer, who had an abstracted expression on his face. *Hm-mm—he's lost interest all right. I'd like to take a bet on the location of the Project we're heading for—*

He picked up one of the pieces, a neuter, held it up to the light, made a show of examining the intricate carving. "Vegan ivory," he mused aloud—then, without altering his tone, "What's the next Project on the list, chief?"

He was watching the Engineer in the wall-mirror. He saw him start violently, observed with interest the sudden widening of the eyes, the dropping of the jaw; then the swift regain of control, the settling of the features into watchful lines. The Psychologist gave himself a mental pat on the back. *Bulls-eye!*

"Sol III." The Engineer's tone was flat, expressionless. "Why do you ask? Know the system?" He threw out the questions quite casually. To a less acute observer he would have given the impression that he didn't particularly care whether they were answered or not.

For a moment Vorgan was tempted to prevaricate, just to make things more interesting. But he resisted the impulse, replied in a manner every bit as offhand as the Engineer's, "Sol? No, I've never visited the system. I merely asked because—" He pretended that enlightenment had just that moment dawned, and slapped hand to forehead, "But, of course, Sol III. I know about *that* Project, all right." He turned to face the Engineer. "An unusual one; very unusual. It's been on the go for quite a while now; hasn't it?"

The Engineer yawned, said in a bored voice, "Why, yes, I suppose it has. A fairly long time." He lapsed into silence, unaware that the expression in his eyes belied the lack of interest in his tone and manner. Vorgan smiled to himself. *Come on, chief, don't act so coy. Ask, man, ask!* Aloud he said, "What's our ETA?"

"Not very far off." The Engineer twisted round in his seat, pressed a button on the control board. A small screen lit up, disclosing a set of seven white numerals on a dark background. The numerals made up a seven-figure number, the first two digits of which were zeroes. The units digit altered rapidly from 2 to 1 to 0, and as the 0 was replaced by a 9, the tens digit flickered from 8 to 7.

The Engineer considered the information on the screen briefly, then snapped it off with another jab at the button. "Six hours, plus or minus ten minutes." He swung back to face the Psychologist. "Just time enough, in fact, to find out if my tri-di skill has deserted me forever." He grinned. "Set 'em up, Psy."

Vorgan said lightly, "Suits me fine." As he maneuvered the pieces into the matrix he was thinking, *What magnificent restraint! But you'll ask, chief—if you've any imagination at all, you'll ask.*

Five hours and fifty-seven minutes later—just as the Psychologist was on the point of resigning — the robonav hiccuped, a series of pilot lights flickered across the control panel, and the direct-vision screen lost its featureless appearance. The jump through hyperspace had been completed.

As the Engineer got up to attend to the board, Vorgan scrutinized the screen. There were several bright stars in the view, the most brilliant by far being an orange-yellow G5 spang in the center at the intersection of the cross hairs. He eyed it thoughtfully.

Some time later the ship, guided by light puffs of her steering jets, drifted up to the hull of a huge metal cylinder that hung apparently stationary in bleak emptiness a hundredth of a light-year out from the G5 sun. The Engineer jerked his head at the vast expanse of metal that filled the screen. "Our destination," he said, quite unnecessarily, "the Unit controlling the Sol III Project." *And,* thought Vorgan, *the note in your voice is—eagerness?*

The transfer to the Unit took no time at all.

There was someone waiting for them on the far side of the air lock's inner door. The Engineer's eyes widened when he saw who it was. "Goth!" he exclaimed in surprise. "What are you doing here? Your schedule—" He broke off, sudden concern tightening his features. "Trouble?"

The assistant engineer said slowly, "Yes—and no. I was on the Achernar II job when I got a signal from Alanth that something peculiar seemed to be going on here." He stressed the verb. "So I dropped in to investigate."

He stopped speaking rather abruptly and looked pointedly at the Psychologist. For a moment the Engineer didn't catch on, then he gave a short laugh. "Pardon my manners—or lack of them. You two haven't met before, of course. It's all right, Goth, you can talk in front of this fellow—he's inner circle. Flash your badge, Psy." After performing the necessary introductions, he re-addressed his assistant. "I take it that you sorted out the trouble, then?"

"That's the odd thing." There was bafflement in Goth's tone. "It appears to have been a false alarm. But I can't understand how Alanth came to make an erroneous analysis—he's no neophyte." He shook his head puzzledly. "His report was this: According to the auto-recorder, the anti-disturbance mechanisms built in to the nega-transformers on Three all functioned simultaneously, yet the subetheric trip-alarms had failed to go off." This made no sense at all to Vorgan; it made plenty to the Engineer.

"So *all* the a-d devices went into operation, eh? Simultaneously? And the alarms didn't work? Now I'll tell you one." The Engineer's voice dripped sarcasm. "No — on second thought I'll save it until I see Alanth. You found the recorder faulty, of course." He made the last sentence a statement, not a question.

His assistant looked troubled; he rubbed his forehead with the back of his hand. "Anti-disturbers and s-e alarms just don't fail, chief . . . well, not in series, anyway, simply because they're not *in* series. So I took the recorder apart. After plugging in a tested replacement," he added hurriedly, as he noticed the glint in the Engineer's eye. Then he shrugged. I'm still searching for the fault."

"Keep at it." The Engineer dismissed the matter. "I'll have a word or two with Alanth later." He turned to the Psychologist. "Care for a look round? This Unit's a lot different from the others we've visited."

Vorgan nodded absently, his eyes following Goth as the latter walked off down the corridor. *He's more concerned than he is prepared to admit. What's been going on here, I wonder?* But he wasn't given the opportunity to speculate more deeply. The Engineer ushered him gently but firmly towards the shaft of a gravlift.

By this time the Psychologist was fully acquainted with the thorough manner in which the Engineer was accustomed to inspect a Unit, and he was accordingly surprised at the rapidity with which this particular tour progressed. *There can be only one explanation,* he thought. *The chief's covering it up well, but his patience must be wearing mighty thin.*

It was.

"This," remarked the Engineer, as he held his hand in front of a photocell, "is the cubbyhole that's reserved for my use—kind of cabin-cum-office—during inspection visits." The metal door dilated. "Step inside, Psy—there's a nectra-dispenser installed here." They entered the room and the door slid silently shut.

The Engineer waved towards a relaxer. "Make yourself comfortable." He did something to the desk in the middle of the room, and part of it fell away to reveal a built-in dispenser. Vorgan reached out, selected a tube, stuck the mouthpiece in the sterilizing chamber of the dispenser. Then he went across and sat down in the relaxer. *Here it comes—*

"Psy, you've been giving me the runaround."

"Who? Me?" Vorgan raised his eyebrows, feigned an air of hurt surprise.

"Yes—you. And well you know it." The Engineer perched on the corner of the desk, picked up a nectratube and took a long pull. "Do I have to spell out my query?"

Vorgan relented. "Uh-uh. Let me guess. You want to know *why.*"

"What else?"

Vorgan cleared his throat. "A reasonable enough request, I suppose." He grinned broadly at the Engineer. "You've had this one stuck in your gorge for a long time, haven't you? And there's no need to glower at me. I didn't invent the secrecy restrictions. But I can tell you why they exist, if you're interested."

The Engineer indicated assent, and Vorgan continued, "Way, way back, when the Federation was in its infancy and Projects had just been instituted, a bad slip up occurred. A Projects chief tried off his own bat to improve on a technique that had been worked out by the Co-ord Council of that time.

"He'd been ordered to install a brace of stimulators on a certain world. No names, no packdrill—all I'll say is that its luminary was a Rim star, one of the brightest.

"From his operating instructions the Engineer learned that the purpose of the stimulators was to accelerate the mental growth of a race of bat-people who were climbing Civilization's ladder fast—but not fast enough. The planet's sun was entering the pre-nova stage, a helping hand was essential, and Psy-Center considered that it would do the bat-folks' group-ego a power of good if they managed to kick themselves into space well before N-day and save themselves—or so they would think—without outside assistance."

Vorgan made a sweeping gesture with his hand. "So—the Engineer had been filled in. He knew that all he had to do was sink the stims, settle his Unit in orbit a light-week out, and observe. But no—he had to meddle. His 'Project under way' report to CC had hardly been filed before he'd decided that he didn't care at all for the look of the big black spots that kept spoiling the star's complexion. He soon convinced himself that there was need for more speed than CC had estimated—and, without a word to a soul, he took a speedster back to the planet and advanced the settings on the stimulators."

There was a soft click as the nectratube, released by Vorgan, sprang back into its socket on the dispenser. He leaned back, his hands laced behind his head, and continued, "This, remember, was in the days when the dangers inherent in the use of stimulators weren't fully appreciated even by Psy-Center, therefore it's hardly necessary to say that the Engineer had no knowledge whatsoever of the risks he was running by tampering with them. To him the stims were simply engines, the pre-setting controls analogous to throttles—move 'em back and you got less power, move 'em forward, more power. He moved them forward—and the intensity of the stim-waves irradiating the planet increased, logarithmically, infusing new life into dying brain-cells, invigorating living ones, awakening dormant ones—

"He succeeded in pushing the bat-people up the IQ-scale fast all right, no doubt about that. But he'd failed to observe that there was plenty of life on the planet besides the bats. Or, if he *had* noticed it, he hadn't grasped the significance of the fact that there was one species the bats had never quite managed to get on top of. Lizards, winged lizards, carnivorous as all get out, and prolific as neutrons in an atom-pile.

"So, while the bats developed from bright to very bright, the lizards moved up from dull to bright. There were a lot more lizards than there were bats, though, and before you could say 'Galactic Federation' a planet-wide dust-up had started. In no time at all the bats weren't reaching for the stars — they had their backs to the wall, fighting for survival."

Vorgan sighed, shook his head. "It was a proper shambles. The Engineer had fifty fits when the first reports came in, but even then he didn't take swift resolute action. Instead, he dithered for ages trying to figure out the best way to remedy things. There wasn't one, of course—an omelette can't be unscrambled. Meanwhile, the situation on the planet grew steadily worse—and the star was showing no signs of relaxing in its determination to detonate right on schedule.

"Eventually he came to his senses and hollered for help. CC took one look at the picture, gnashed their collective teeth, then cut red tape left, right, and center getting a rescue expedition organized. The resources of half a hundred star systems were mobilized, squadron after squadron of transport vessels rushed Rimwards, and they managed, somehow, to get all the bats, and the lizards, off the planet in time. A couple of hours after the last rescue ship had lifted into space and shifted into the safety of supercee, the star exploded."

Vorgan paused, reclaimed his nectra tube. "I leave it to you to imagine how delighted CC were, having to clear up *that* mess. The Engineer was drummed out of Projects, of course. He had to be given full Lethe-treatment to save his sanity, but what became of him after that nobody knows—or cares."

He pointed the tube at the Engineer. "There, then, is the explanation of CC's adoption, from that time on, of its famous hush hush policy—the one you P-lads complain so bitterly about. The purpose behind a Project is kept dark—until the time is ripe. Which, for this particular Project, is, as you may have guessed, *now.*"

He sipped the nectra, glanced out of the wall-port at the glittering star-curtain beyond, went on, "Still, chief, I'm sure you must have worked out *something* for yourself. If you think back over what you were asked to do, and have done, and let your imagination travel around a bit—"

"How you Psycho boys talk!" The Engineer scowled. "Look here. Data: Projects was ordered to carry out nega-transformation of one medium-size planet, to wit, Sol III, then to set a Unit in orbit a hundredth of a light-year out from Sol, said Unit to have its alarms triggered to the 'formers installed on the planet. Period. How many solid, seamless conclusions do you expect me to be able to draw from *that?!!*" He shook his head. "Uh-uh, no dice. I'm a practical man. You do the thinking for me."

Vorgan sighed, raised his eyes to the ceiling in mock despair. In the fashion of psychologists the Cosmos over he cogitated briefly, and not for the first time either, on the weird and wonderful course Civilization might have taken if the running of things had been left in the hands of engineers—and he gave a mental shudder.

"Right." He adjusted the relaxer until he'd found the optimum comfort position, marshaled his thoughts. "Here goes. To begin with, I'll have to fill you in on several matters relating to—population.

"In the galaxy, and by that I mean the main system, the satellite clouds, and the globular clusters, there are, in round numbers, thirty-five million planets. Thirty million are inhabited, about two million are part-colonized, the rest—no good. Too big, too small, too radioactive, too one thing or another.

"Birth rate everywhere is on an upcurve, particularly on the parthenogenetic worlds—and space is sewn thick with them. Mortality rate, thanks to recent advances in antiagathic medicine, is on the downbeat. Galactic population, in fact, is increasing at the rate of five per cent per century, and you don't need the Z-Computer at Cosmo-Center to work out how overcrowded this stellar system of ours is going to be in twenty centuries' time. Take it from me—there won't be any such thing as wide open spaces any more, on any planet, anywhere."

He paused, ostensibly to take a sip at the nectra tube, in reality to let the Engineer get a word in.

For several minutes the latter's face had been trying to register a number of different expressions simultaneously—surprise, enlightenment, disgust. He opened his mouth, choked, spluttered, eventually burst out with, "Spinning spirals, it's as clear as the light of S-Doradus now. You need say no more, Psy—I can guess the rest. But of all the dirty underhanded tricks to play on a race! Keeping them planet-bound! It makes me sick to think of it—and of the part I've played in the jobbery." His expression grew lugubrious. "I suppose CC plan to use the same device on every up-and-coming species from now on?"

Vorgan had difficulty in keeping his face straight. "No, no, no! You've got it all wrong, chief." He wagged a reproving finger. " 'Ware the dangerous habit of conclusion-jumping. It'll land you in trouble one of these days." His tone altered. "But to return to the population problem I mentioned. You haven't asked why we don't spread out, explore and colonize one of the nearer galaxies. Andromeda, for instance."

Wrinkling his forehead, the Engineer looked for a catch, but could see none. "Surely you know the answer to that one," he said after a moment or two, "or have you forgotten all about a little thing called the decrement effect?"

The Psychologist nodded. "Precisely. The decrement effect. The factor that makes supercee—supercee as we know it, that *is*—inoperable in intergalactic space." He looked thoughtful. "I don't think anyone's yet evolved a satisfactory theory to account for the existence of the effect. The only thing that's certain is that it's tied up in some way with gravity fields—or, rather, with the absence of g-fields." He shrugged. "Anyway, for that reason, exodus is out. Therefore we clipped the Terrans' wings."

This, in view of the Psychologist's recent denial, sounded very much like a blatant *non sequitur* to the Engineer, but he made no comment and let Vorgan carry on.

"Know anything about Terra?"

The Engineer shook his head, not trusting himself to answer civilly. *Great day in the morning, Vorgan, aren't you ever going to get to the point?*

"It's an unique world. Unique in the sense that it's the only planet in the galaxy on which a race has evolved that has leaped from neo-lithic culture to space-flight in less than forty millennia. Forty—and the galactic average is one hundred and forty!" Vorgan glanced across at the Engineer. "That startles you, doesn't it? There's an awful lot of mental power confined in that see-tee cage of yours, chief!" He chuckled briefly. "Wonder how well you'll sleep o' nights now you're in possession of *that* information?"

Then his face grew serious. "But think, man, just think of the driving force there must be behind those Terran minds. Minds that conceived and constructed fission weapons only a half century or so after they'd built their first puny electric power plant. Minds that developed a star-drive less than a century after they'd launched the first lighter-than-air craft into the atmosphere of their world. Minds, in fact, that up till now have knocked down every obstacle, natural or unnatural, that the race has encountered in its surging progress."

He paused dramatically. "Right, then. Can't you guess what we've done? We've denied the Terrans the rest of their system's planets, we've denied them the stars in this particular island universe. But d'you honestly think they'll quit striving now?"

Vorgan shook his head decisively. "Not that race, chief! In effect, we're using them to get us out of a jam. We've dropped our Number One problem in their laps—and the prediction is that in less than half a millennium they'll come up with an efficient streamlined intergalactic drive. As soon as that happens we'll step in, of course, and normalize their world." He spread his hands wide. "It's as simple as that."

The Engineer removed his eyes from the view beyond the wall-port which he had been studying with broody gaze during the latter part of Vorgan's discourse. He took a deep breath.

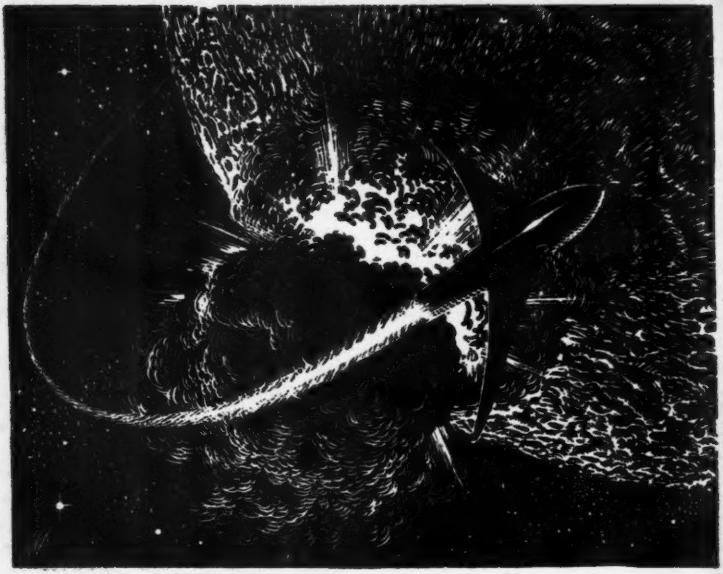
"I'd just hate," he said quietly, but with an intensity of feeling that made the Psychologist blink, "to be the purveyor of *that* information to the Terrans—especially in five centuries' time. I've a suspicion they're not going to like the story—not one little bit. There's a limit—"

He broke off, started to prowl the room restlessly. Suddenly he halted, looked curiously at the Psychologist, and asked, "What did you say?" Vorgan shot him a sharp glance. "What d'you mean, what did *I* say? *You* were doing the talking."

The Engineer opened his mouth to reply, then shut it without saying a word, bit his lip, and began to pace up and down the floor again. After a moment or so he said, "What I can't understand, Psy, is why in the name of Mira the Terrans couldn't have been admitted to the Federation as soon as they developed supercee. Surely it would have been more sensible—and more humane—to let them *co-operate* with Cosmo-Center on the igd problem?"

A frown passed over Vorgan's face. He declared flatly, "It wouldn't have worked. The Terrans have an aphorism, so I've heard, to the effect that invention is the offspring of necessity. That's a fundamental truth, where they're concerned." He leaned back in the relaxer, his fingers playing absently with the tube to the nectra dispenser. "According to the Predictors, if the Terrans had been allowed to gain their planets they'd have spent at least a couple of centuries grappling with the problems connected with colonization before their minds turned to interstellar flight. And even if we'd denied them their sister worlds, but given them the stars, the impact of galactic culture, so the graphs showed, would have blunted the edge of their mental drive, stultified their mental growth, and with all the will in the Universe they just would not have been temperamentally capable of reaching an appreciation of the driving urgency of the igd matter.

"They had to be given an incentive, you see, to reach out for not just another planet, or another star, but another galaxy. Impetus, stimulus, goad—call it what you like. At Psy-Center we prefer the term: forced growth." He sighed. "Tough on the Terrans, I agree—but only for a time. They'll benefit from it in the long run. Surely you can see that." But even as he spoke he could tell



from the expression on the Engineer's face that the other wasn't convinced at all.

There was a long strained silence.

The Engineer was thinking: *I know the why now, but I'll be burned if I'm any more content. Planetbound! Thank the stars I won't be around when* this *Project comes to the boil . . .*

And the thought that started to revolve in the Psychologist's mind was: *It's for the good of the galaxy, of course, but—I wonder if, after all, we've done right . . .*

The walls and ceiling of the room suddenly glowed with lambent green flame.

"Spinning spirals!" The Engineer looked aghast, made a wild dive towards the desk. "That's the visual for AAA emergency. First time in two hundred years—" The interphone had time only to emit a weak buzz before he snatched it from its cradle.

Vorgan could hear a tiny voice squeaking away, but the words were indistinguishable. The Engineer understood what the voice was saying, though, and his eyebrows started to crawl up his forehead as he listened.

"Huh . . . HUH? . . . And the alarms? . . . You've checked? . . ."

In his exclamations there was a monstrous surprise—and something else.

He said sharply, "Enough. I'm on my way over. Hold everything."

He was halfway along the corridor to the grav-lift before the Psychologist caught up with him.

"I trust you've no objection to my stringing along." Vorgan didn't make it a question. It would be *lese majeste* for the Engineer to turn down the request of a CC adviser—and he knew the Engineer was well aware of that fact. He went on, "Incidentally, what's the panic rush in aid of? Is the Unit likely to go up in a big blue flash any moment now?"

The Engineer didn't slacken his pace. He spoke without turning his head, and made no attempt to match Vorgan's bantering tone. "You'll find out soon enough when we get to Control Point. But I'll tell you this much now—you'd better be prepared for the shock of a lifetime!"

His jaw muscles tightened in stubborn lines, a clear signal that he intended to give nothing else away. Vorgan felt his pulses quicken. *The shock of a lifetime? Does the chief mean that literally—or was he only being picturesque?* He shrugged. *No matter. We'll soon find out—*

The lift whisked them to the entrance to Control Point. The Engineer raced ahead, making a beeline for the main desk. He brushed aside a very worried-looking Goth, shut off all the switches, then cut them in again quickly, one after another.

Vorgan looked over his shoulder. He had seen it many times before, but momentary vertigo gripped him, as it always did, when the space-screen became alive, shimmered into focus. The constellations, pinpoint patterns of hard brilliance embedded in a backdrop of sheerest jet, moved as the Engineer's fingers found the traverse control. The G5 sun expanded, the automatic filters cut in then out as the screen's focus altered and the orange star slid away to one side.

A planet sprang into existence, ballooned to fill quarter of the screen, receded into infinity. Vorgan had time only to observe that it was reddish in tint and tracered with fine lines from pole to pole. More stars, then another world, cloud-wrapped, enigmatic, swirled across the plate, disappeared.

The Engineer began to show visible signs of concern. His breathing grew fast and sweat formed on his forehead. But he still made no comment, offered not a word of explanation.

At length he took his hands from the control board, turned to face the Psychologist. His face was flushed, his expression an amalgam of emotions. Vorgan didn't speak: elucidation could wait until the Engineer had found the right words. But his mental bulwarks took a pounding when the Engineer's next reaction made itself suddenly, shockingly, manifest.

Laughter. Peal upon peal of near-hysterical mirth. But it wasn't infectious mirth.

Quickly suppressing his initial surprise, Vorgan eyed the Engineer closely, clinically. A dispassionate analysis formed in his mind: *A prime emergency, and the top man laughs. Therefore: the emergency is nonexistent, or*—for a moment his mind rebelled at what appeared to be the only possible alternative—*or it's so incredible a crisis that the Engineer can't handle it . . .*

He cut short the analysis. *Not enough data.* So he waited, immobile, expressionless.

At last the cachinnation ceased; the Engineer leaned weakly against the desk. "Sorry," he gasped contritely, "sorry about that. But I just couldn't help seeing the funny side of things, 'specially after that lecture of yours."

Vorgan felt abruptly cold. A tendril of amorphous fear touched his mind. *There is something here that*— He tried to control his voice, but to his own ears the tremor in it was tremendous. "Let's share the joke then, chief, shall we?"

"It's no joke." The tone was serious—too serious. "Terra has—*gone.*"

"Gone?" It didn't mean anything. No mental bells rang, no alarms buzzed, no jigsaw section clicked into place. It was an empty word, as devoid of meaning as a . . . as—

He couldn't think of a simile.

"Gone?" Blankly, he repeated the query.

"Departed, hit the star-trail, vanished." The Engineer's worried look had faded, and his manner had grown brisker. In a small corner of the Psychologist's mind the diagnosis formed, *Here is a man who has lost an incubus*—

The Engineer went on, "Terra is no longer in the Solar System. Goth was examining it on visual twenty minutes ago when it disappeared. And that means it went away three and a half days ago. *Three and a half days!*" He snapped his fingers, spun round on his heel. "Goth! When did you get that summons from Alanth?"

The assistant engineer's eyes narrowed in sudden thought. He strode across the room, pulled the Unit's signals log from its cubby, turned the pages, came back and placed it open on the main desk. Silently he pointed to the entry recording the signal that had brought him from Achernar.

The Engineer nodded. "So Alanth *was* right. And the auto-recorder wasn't defective after all." He grimaced. "Means we're going to have a very tough time explaining why the alarms didn't function. Problems galore."

He turned back to Vorgan, who was standing quite still trying to control his racing thoughts. "What I can't figure out, though, is why the Terrans went to the trouble of taking their satellite along with them to—well, wherever they're going."

"WHAT!" Vorgan's mind fastened on this last remark of the Engineer's, grappled with the tremendous implication contained in it, spanned a contracting logic-gap, and reached a conclusion whose import made him reel.

"You mean," he forced himself

to speak slowly, "that Terra and its moon have *together* left this system?"

The Engineer riffled the pages of the signals log with his thumb. "That's what I said, Psy. We're taking immediate steps to notify CC and the web stations." His glance went to Goth, who read its meaning straight away; he slipped quietly from the room.

The Psychologist slumped down on to the vacant control stool. His brain felt as though it were immersed in liquid helium. As from a great distance he heard the Engineer say, "It's a stunner, of course, but I can't see how it's going to affect things as badly as your expression appears to indicate. Offhand I'd say that the Terrans, when they hit on the secret of star-driving a planet, which isn't much of a trick once the supercee principle is clearly understood, decided to go off on a hunt round the galaxy for a see-tee system. These boys are triers, all right." He leaned against the desk as though he hadn't a care in the world. "Don't worry, though. We'll pick 'em up." His voice rang with confidence.

Vorgan straightened his back, shook his head. He felt sick and empty. "Don't be a blind fool," he said wearily, "We won't 'pick 'em up.' Nobody's going to pick them up—ever. Can't you see why not? Haven't you spotted the most significant, the most disturbing feature about this vanishing act?"

He paused, but the Engineer chose to interpret the questions as rhetorical.

"What idiots we've been! Indolent, overconfident, purblind imbeciles!" He pounded his fist hard on the desk top. "Look—we handed the Terrans a whale of a problem to cut their wisdom teeth on, didn't we? Come on lads, we told them, whip us up a super-overdrive. But, simultaneously, we gave them a *second,* simpler, problem! Why, surely we should have foreseen that a race we expected to crack the igd nut for us wouldn't stay foxed for long by the see-tee hocus-pocus!"

His voice grew uncharacteristically impassioned. "Can't you envisage them, tied down to their tiny overpopulated world, alone—so far as they knew—alone in a star system constructed of contra-matter? Can't you imagine their minds at work, struggling hard to formulate a theory that would explain the 'see-tee' nature of their sister-planets and the nearby stars? For to them, remember, their planet was normal, the rest abnormal.

"And at last they'd arrive at the only logical solution—that their normality was artificial, that no sane hypothesis of planetary or stellar origin could possibly account for the existence of a solitary *x*-type planet in a *y*-type system. At a guess I'd say it was the existence of the *y*-type satellite that broke the first scales from their eyes.

"Put yourself in the Terrans' shoes, then—better, in their minds. Their world, they are now suspiciously certain, has been deliberately metamorphosed. The whys and the wherefores they can't guess, but they *know* they've been manipulated. From there on the rest, to them, must have been as easy as riding an anti-grav sled. What had been done could be undone. I'll bet it took them, once they put their minds to it, less than a decade to locate and ferret out the principle of the nega-transformers you thought you had hidden so cleverly all over their world. With their minds sharpened by suspicion they'd naturally be on the lookout for anti-interference devices—and when they found them they obviously took proper precautions to insure that none of the devices would operate until they were ready for the Grand Finale. And *that* event was scheduled when they'd built enough *posi*-transformers to reverse the see-tee effect and make their world normal again." He paused for breath.

The Engineer was looking incredulous. "You mean to say you think they knew—*about us?*" Skepticism made his voice hard.

"Of course. The disappearance of Terra *and its moon* doesn't make sense otherwise. Taking the satellite along was equivalent of a flourish of trumpets, a roll of drums, or—more likely—the cocking of a snook. A typical Terran gesture." A faint smile flickered across Vorgan's features. Then he went on, "Here's how I see it. They tumbled to the see-tee trick. And shortly after that they sent spies out into the galaxy."

"Why—!" The Engineer gasped, as Vorgan's words set off a memory chain-reaction in his mind. "Those rumors of 'ghost' ships, out Betelgeuse way!"

"Precisely. Betelgeuse—where CC record offices are sited. Another obscure mystery explained — another piece of the jigsaw fits into place. The 'ghost' ships—vessels that appeared and disappeared like will-o-the wisps. No one gave serious thought to them, remember? Terran ships, of course, equipped with small Terran-built nega- *and* posi-transformer units, sifting out the truth. It couldn't have taken them long. And the ships homed to the mother-world, carrying with them the secret of Project Forced Growth."

Vorgan traced an abstract pattern with his index finger on the glass of the space-screen. "From what I know of their psychology, I can guess how they reacted. They spat on their hands, rolled up their sleeves—and buckled down to the task we'd set them."

"*NO!*" The Engineer's rejection was explosive. "No, I don't see that at—" He stopped short, then asked, "Did you speak?" He answered himself, "No, of course you didn't. Must be something the matter with the acoustics of this room—or my hearing." Rubbing his ears with his palms he went on, "Now, supposing—just supposing, mind you—that your surmise about the Terrans having caught on to the see-tee trick is correct, surely they'd come sailing triumphantly out from their system and make it known that they'd trumped our ace? That's what I'd expect any normal race to do in the circumstances."

His jaw suddenly dropped as he realized what he was saying. He smacked fist into palm. "Why, there's the answer. That's what they *have* done, in fact. I'll bet my pension to a pair of old boots that Terra is being set in orbit round Proxima or Sirius at this very moment, and the Terrans are indulging in high-powered back-slapping all round. What d'you say to that, Psy?"

"Old friend," replied the Psychologist, shaking his head sadly, "how many times must I remind you that the humans of Terra are not and never have been a normal race—not by Galactic standards of normality. If we'd only paid more attention to *that* facet of their make-up when we planned this Project—" His voice grew dreamy as he pondered on what might have been.

The Engineer made an impatient gesture. "You were saying—?"

Vorgan picked up the broken thread. "No—the Terrans wouldn't be satisfied with merely putting the nega-transformers out of commission. They'd realize that such a course of action would represent only a single barely significant move in the game—like moving a king out of check. Their psychology would demand that their move, when it came, should *win the game.*

"So—I believe that they brought the full force of their minds to bear on the problem that the galaxy had dumped in their laps." He took a deep breath. "And I'm convinced by the events of the last hour that—they solved that problem."

The Engineer snorted derisively. His face twisted and he said angrily, "Solved it, eh? Don't give me that, Psy!" He paused momentarily, then continued in a more level tone, "You're just making guesses, y'know. By your own account, that particular nut just can't be cracked in that short space of time, even by a super-race. Why, you told me yourself that the Predictors reported it would take half a millennium—and here it's less than a century since P-Unit put the hex on Terra." He paused, shook his head slowly from side to side. "Frankly, and with all due respect to your undoubted ability, I feel I'd rather put my trust in the Predictors. Why, man, they couldn't be *that* far out!"

"Oh yes they could," demurred Vorgan softly, his fingers playing idly with one of the desk controls. "Where Terrans are concerned I very much doubt—now—whether the prognostications of mechanical predictors can be taken seriously. Intuition, not logic, is what is needed."

He sighed heavily. "How wrong we were to use forced growth on that race. Mark my words—we shall have cause to regret that decision for the rest of our lives." His chin sank down to rest on his chest. "I still say they found the superdrive—and that they have no intention of letting us in on the secret, either. That, to the Terran mind, would be the ideal revenge. Poetic justice, they'd call it."

He gazed unseeingly into the blank plate of the space-screen. "I wouldn't be at all surprised," he said, his voice dropping to almost a whisper, "if they weren't laughing their heads off over it this very moment. In Andromeda."

("No—not Andromeda.")

The voice was clear and confident and seemed to come from all directions at once. Vorgan, lost in his reverie, though tiredly, *I'm not going to argue any more.* Then, in dawning wonder, *WHOSE VOICE WAS THAT?*

He whirled, to read only blank bewilderment on the face of the Engineer. He opened his mouth to speak—then simultaneously both he and the Engineer became aware that they were not alone in Control Point. As one they turned—and froze.

He stood about ten feet away—a stocky, dark-haired alien with a round, pleasant face. His eyes were intense blue, deep-set, twinkling with secret laughter. His arms were folded on his chest, his hands empty.

The Psychologist's mind spun in perplexity. *A TERRAN. But how—?*

("Yes, Psy Vorgan, a Terran—")

The Psychologist's eyes widened. The stranger's lips had not moved: the "voice" had spoken inside his head. It continued, ("—and, as you now realize, a telepath. But telepathy is the lowest-valued card in the hand we hold *now.*") There was a hint of repressed exuberance in the mental message.

Abruptly the Terran vanished, reappeared with his head nearly touching the curved ceiling, fifteen feet above floor-level. He drifted down until his sandaled feet hung several inches from the floor—and stayed there. Vorgan heard the Engineer give a startled grunt, then his blood chilled with a nameless fear as he watched his companion start off on a rapid, involuntary circuit of the room, flat on his back, five feet in the air. The uncanny force which propelled him brought him back to his starting-point, lifted him into a vertical position, and deposited him on his feet beside Vorgan. He stood swaying, gasping sounds coming from his throat.

His face white, his thoughts in turmoil, the Psychologist heard the "voice" speak again in his mind.

("Telepathy — teleportation — telekinesis. An ounce of proof is worth a ton of discourse—hence the demonstration. You'd give a lot to possess just one of these powers, wouldn't you, Psy Vorgan? Can you wonder, then, that we of Sol III consider Project Forced Growth to be the best plan ever to come out of Psycho-Center?") The tone of the Terran's thought was light, but there was no trace of mockery in it. His eyes smiled, and the smile was friendly, not derisory.

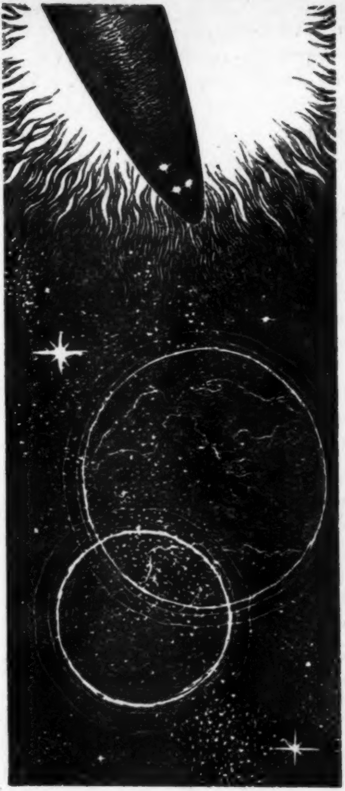
("The see-tee trick was clever. As things turned out, though, it might have proved a much better trick, from your point of view, if you'd installed nega-transformers on every world in the System *except* Terra. Still, what you did knocked us for a loop and baffled us for a long time. It might have been baffling us still—but for one little by-effect the existence of which you couldn't possibly have foreseen.")

The Terran looked down at the Psychologist and shook his head. ("Your guess was wrong, Psy Vorgan. It wasn't the impossibility of, to use your expression, 'a solitary x-type planet in a y-type system,' that gave the game away. *That* penny dropped later.") His eyes twinkled. ("I hope you understand the metaphor.") He was silent for a moment, then he went on in a different tone. ("I'd better start at the beginning—at the time the Project was initiated operationally, a year or so prior to our sending up manned space stations to orbit our world.

("On sundry dark nights P-Unit personnel descended in small, fast, radar-screen ships, and planted scores of those remarkable devices known as nega-transformers all over Terra. They concealed them well—we had trouble finding them when, at a later date, we went looking for them equipped with the co-ordinates of their positions! When the installation was complete the ships withdrew to this Unit, and at a pre-selected moment a signal was transmitted which triggered the 'formers, all of them, simultaneously.")

The Terran's gaze settled on the Engineer. ("Patience, chief—you'll find out shortly how we got to know all that.

("The 'formers did the job for which they'd been designed. They generated overlapping fields which extended inwards to Terra's core and outwards to a distance four thousand miles beyond the tropopause. Inside those fields, e-m charges reversed, plus and minus changed places, and everything on or above Terra—its land masses, oceans, atmosphere, the 'formers themselves—turned see-tee in a millisecond. The metamorphosis wasn't detectable by our instruments,



of course—in the language of relativity, Terra was a 'closed system'.")

He shrugged his shoulders expressively. ("You know what happened after that. We launched the artificial satellites, then rockets to Luna—and fifty years later we were back where we started. No Moon-base, and no planet-base either in our own or in any other system.

("It took us several decades to locate the flaw in your Project. We're not very proud of that. Hindsight's admittedly a bit of a mental whip, but we feel we were very slow at catching on. What delayed us was—of all things—overspecialization in the sciences.")

He shifted his stance on the invisible platform five inches above floor-level. His lips twisted wryly. ("Yes—overspecialization. Physics, for instance, had split into half-a-dozen main branches, and fifty sub-branches. Astronomy—nobody was an all-round astronomer any more. If he didn't study sunspots all the time, he spent his life examining Moon-craters—or else he was a variable star specialist, or a nova expert. Or an authority on meteors—or meteorites.

("Meteors. We'd had them through all our recorded history. The same with meteorites. And fifty years elapsed before it occurred to someone to try to correlate the complete absence, over a very long period of time, of meteorite reports, with the phenomenal number of meteor displays that had been brightening the night skies, and often the day skies, for—again—a long, long time.

("The rest followed automatically. A check back through the records indicated that something peculiar must have happened about fifteen months before the first space-platform was launched. Up till that time, meteors and meteorites—after that time, more meteors than ever before, but no meteorites. Something smelled. If our noses had been more sensitive, we'd have detected the fishy odor long before half a century was up.

("Still, we hadn't exactly been marking time during that half-century. When the ships came back from the stars with the news of the 'see-tee' nature of the rest of the immediate universe — well, frustration wasn't the word for it. We'd been ready and eager for space—and the door had been slammed in our face.

("The setup was one practically made-to-order for the psychologists and sociologists. For decades they'd been warning us that we were, as a race, putting far too many of our eggs in one basket—the technological one. And, lo and behold, here was technology, in the shape of astronautics, taking a beating and showing no signs of being able to recover from it. 'Right,' they said, 'it looks as if we're going to be stuck on this one world, if not for keeps, at least for a long, long time to come. No use crying for the Moon any more—or for the stars—they might as well be in another dimension. What you can't have you've got to learn to do without. *But*—there's obviously a necessity now, more than there ever was at any other period in our racial history, for a planned ecology on a world-wide scale. And for that, one hundred per cent co-operation between nations is a *must*. But we'll never get that until national representatives understand one another completely. Poor communication has been the root-cause of most of the world's troubles to date. So—let's concentrate on cracking *that* problem'.")

The Terran smiled at Vorgan. ("The social scientists were, as a body, remarkably single-minded. Perhaps—who knows—it was a sense of destiny that kept them marching along in perfect step. They took a pot-shot or two at their first target—the devising of a truly universal language—soon realized that hitting it wouldn't necessarily solve the problem, and raised their sights higher. They became convinced that the answer was to be found in a deeper understanding of the working of the human mind itself.

("And when the money and the research that had gone into spaceship construction was channeled into investigation of the esp fields—why, we started getting somewhere fast. In ten years more progress was made in psionics than in the preceding ten thousand. In forty years we came—a long way.

("It was in telepathy that the greatest initial strides were made. By the time the meteor-meteorite paradox had been recognized, telepathy had been forged into a tool—a kind of super-scanner. We know now that a trained telepath's 'sphere of receptivity' has a diameter of nearly one point five light-years—and this Unit is only a few light-days out from Sol.

("So the Unit's existence became known to us—I leave you to imagine the violence of our first reactions to that discovery—and from the minds of the operating staff we learned all about the nega-transformers planted on Terra. But we ran into a blank wall when we searched these minds for the purpose behind the Project, and we had to go all the way to Betelgeuse before we uncovered the truth. And the rest you know.")

Vorgan blinked rapidly, came out of his trance. He knew the Terran could read his mind; he gave voice to his thoughts for the benefit of the Engineer.

"My congratulations to you and your race." His voice was humble. "It is obvious that we of Psycho-Center gravely underestimated the potentialities of the Terran mind. And it is also obvious that your race has proved beyond question its title to the galaxy — may you control it with greater wisdom than your predecessors."

The stranger's voice laughed gently in his mind. ("Don't wish *that* on to us, Psy. Why, with the powers we possess now, we—") The thought snapped off, and the Terran's eyes narrowed in concentration for several moments. ("Perhaps this will give you a deeper understanding.") He made a curious little self-depreciatory gesture. ("But don't run away with the idea that this is a one-man show. For this demonstration I need help. *Come in, Link One!"*) He pointed at the blank space-screen.

It became miraculously alive. In the center of the view hung an island universe, majestic, coldly beautiful, a static whirlpool of light. ("Recognize it?") Vorgan stared. It looked familiar, but he couldn't name it. It wasn't Andromeda, or—

("That — is *this* Galaxy.")

Vorgan stiffened. *Of course—.* Then his gaze swung to the Terran. "Another psi-trick? Hypnotism?"

("No. You see what you see, Psy. You are looking at our home galaxy from a point on the fringe of the Greater Magellanic Cloud. At this moment the Unit is separated from the Solar System by a spatial gap of twenty-six thousand parsecs—")

Vorgan felt his senses swim. The implication of the Terran's statement was staggering. *Minds that can pick up a ten-thousand ton cylinder and fling it in an instant across an intergalactic gulf—*

He opened his mouth to speak again—and was interrupted by the Engineer.

"NO!" It was the first time the Engineer had spoken since the Terran had appeared in the room. His features were contorted in disbelief. "NO." He repeated the denial. "That I can't swallow. Mira only knows what kind of distorter-circuit you've been hanging on our senses, but you've overstepped yourself at last." He twisted his neck round, glared at the dark-haired stranger. His tone was belligerent. "Trickery, Terran—keep it for children." He strode purposefully towards the control desk. "There's obviously some device here—"

He touched the controls. The smile did not leave the Terran's lips. The field of view altered, the whirlpool disappeared—darkness—then a sudden blaze of light. ("The Cloud—at close range.") There wasn't a trace of equivocation in the Terran's whispered thought.

Vorgan could not tear his eyes from the stellar splendor in the screen. Part of his mind noted that the Engineer's hands were wrestling with the magnification controls. And nothing happened; the image wouldn't reduce. He thought, *There's your confirmation, chief—*

The Terran nodded as he caught the thought. ("Exactly. I must stress, though, that to teleport the Unit over such a distance isn't a simple matter. It is not a task that can be performed by one mind alone. Watch the screen. *Link One!"*)

There was no sensation of motion—but the brilliance in the screen was replaced by a spangled darkness in which only one bright star was visible. It was, quite unmistakably, Sol.

Softly the Terran spoke once again in the minds of the Psychologist and the Engineer. ("The psionic key opens many doors—in the past as well as in the present. For example—*Link Two!"*)

For a timeless instant the Engineer revisited his office in Projects HQ. The HQ was located rather more than a hop-skip-and-jump away from Sol. To be precise, it was constructed on a moonlet which circled the outermost planet of supergiant Mira.

His feet moved of their own volition, carried him forward to the long gray plastic-and-steel desk behind which he'd taken great pains to spend the minimum of time since he'd climbed to the top post in Projects. The desk top was bare, except for a screwed-up ball of paper. His hand, motivated by an impulse that didn't originate in his mind, reached out to pick it up . . .

Psy Vorgan felt the blood pound at the back of his head. He recognized his whereabouts instantly. It was his privacy cubicle in the Advanced Psychotherapeutics Techniques Center on Arcturus VII—and he knew that APTC had been disbanded and moved to Regulus—*when? Was it forty-five or fifty years ago?*

Clamping down on his racing thoughts he opened a locker, and his fingers suddenly possessed a will of their own and reached out to grasp . . .

They were back in Control Point.

Slowly the Engineer straightened out the crumpled piece of paper. He read and reread the coded symbols imprinted on it, his mind refusing to credit the authenticity of the signals that his optic nerves kept flashing to his brain. What he held was the message chit that had set the Sol III Project into operation nearly a century before—

The Psychologist's mind was full of a wonder such as he'd never experienced in his life before. As he thumbed slowly through the sheaf of lecture notes, in his own script, which were over five decades old, he felt as though he'd been vouchsafed a glimpse through a window into infinity and had observed—

The Terran's thought cut across his musing. ("No device—no trickery. Merely a further demonstration of the powers of untrammeled minds. I think you understand now why we'll be eternally grateful to Psycho-Center for originating Project Forced Growth. Admittedly the end-result is far different from what Galfed planned, but the Project can hardly be termed a failure. We've shown you

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how intergalactic travel can be achieved—and when you take charge of Psy-Center two years from now, Psy Vorgan, it shouldn't take you long to fashion your own key.")

Vorgan smiled faintly, shook his head. "You overrate my abilities—and my importance in the scheme of things. I assure you there's as much likelihood of my 'taking charge of Psy-Center,' as you put it, in two years time, as there is of . . . well, of Sol's going supernova five seconds from now."

The Terran chuckled. ("Sol's stable enough, granted—but I still say you'll be top-man in Psy-Center in two years.") The timbre of his thought altered slightly. ("I'm not guessing, either.")

Vorgan tensed; the smile left his face. He stared unwinkingly at the stranger for a long moment, then he took a deep breath and said in a low voice, "I think I understand. Clairvoyancy, too?"

"Your mind works fast, Psy. Yes—clairvoyancy. We haven't progressed very far along that line, though—had other things to think about. Not very many of us can probe as far as a month ahead, and only a handful as far as two years.")

Vorgan discovered that his mind no longer reacted to surprise. *And no wonder,* he thought heavily, *no wonder—in the past few hours it's had enough to last it fifty lifetimes.*

His eyes lifted again, met the Terran's. *Past, present—and future. I realize now why your race has no desire to take over the galaxy. Your sights are set higher, far higher. Right?*

("I wouldn't put it that way.") The Terran's face grew serious. ("The fact is that we've come up fast and we feel we need time, and freedom from interference, to—consolidate. And we cherish our independence—we prefer to forge our own destiny, rather than have it arranged for us.

("So—we're quitting the Galactic scene, going into voluntary exile. For a time. If Galfed want to search for us, they're welcome to try. And they *will* try—but we've got a two-year window into the future, and there's no sign of their succeeding in that time.")

He drew himself erect. ("I'll leave you to your worries now. There will be rather a lot of them, I'm afraid; both of you are scheduled for some pretty intensive grilling sessions with CC's top question-askers.") Once again the irrepressible smile lit his features. ("But you'll live through them, never fear. And perhaps, one day, we'll meet again.")

His arm went up in jaunty salute—and he vanished.

For several moments Control Point was quiet except for the muted hum of the circulators. Then Vorgan stirred, changed his stance. "And that," he said softly, "is very definitely *that.*" With a supreme effort of will he dispelled the feeling of somber regret that threatened to enshroud his mind, and when he turned and addressed the Engineer his tone was light. "Well, chief, the Sol III Project's wound up now, so there's no point in letting this Unit squat in this sector of space any longer. Tell Goth to engage the overdrive and let's hit the trail for home." He started walking towards the doorway. "Whereabouts is that room with the nectra-dispenser?"

As he stood at the grav-lift shaft, waiting for the Engineer to catch up with him, he was thinking, *If the Terran was right, I'm going to be a busy little bee during the next two years—and for a long time afterwards. Might as well relax while I've still got the chance—*

Out on the Periphery, a blue-green world, accompanied by a massive cratered satellite, circled a main-sequence star which was designated on Galfed star-charts as—planetless.

In a city on the night-side of the blue-green planet a conference was breaking up. It had been a peculiar kind of conference; not all of its members had attended in person.

The chairman and the vice-chairman stood talking near the tall window that formed one side of the conference hall. The vice-chairman was saying, (" . . . To reach Andromeda? I give them fifty years.")

His companion shook his head slightly. ("Less than that, I'd say—much less. They've made no progress at all in psionics, true—but they've been given an almighty stimulus now. Don't forget, they've been *shown* the road; we didn't even know the road existed—let alone where it led to.") His deep-set blue eyes gazed out at the lights of the city. ("I wonder how long they'll take to discover just how many minds are needed to teleport a planet.")

("Yes, I wonder.") The vice-chairman smiled. ("It'll be interesting to watch them finding out.") He turned his head, glanced round the now - empty room. ("Everybody's gone home now. Time I left too, or the little woman will be trying out a forced teleport on me. Adios.") He disappeared.

The chairman sighed, moved towards a chair which faced the window. As he sat down his pipe drifted out of his pocket, steered itself to between his teeth. He bit down on the stem, thinking whimsically, *Little tricks please little minds—* Then soberly, *No—not little minds any more. More powerful, now, than any others in this galaxy.* This *galaxy, yes—* His eyes lifted to a night sky in which less than a score of stellar points twinkled. In the vast black gulfs between the stars the extragalactic nebulæ gleamed mistily, faint feeble glowworms in a monstrous canyon a million megaparsecs deep. *But what of* these?

And his mind followed the thought to its logical conclusion. *I wonder whether some day, out there, we'll encounter "foemen worthy of our steel"—*

It was just as well for his peace of mind that he could not scan a century ahead . . .

THE END

GIFTS...

The trouble with help is that there are several kinds; the kind you want, the kind you need, the kind you think you deserve — too many kinds.

BY GORDON R. DICKSON

Illustrated by van Dongen

THE paper boy, cutting across soft spring grass of the front lawn in the bright sunshine of a late May afternoon, was so full of bubbling expectations that he did not see Jim and almost threw the newspaper into Jim's face.

"Oh, here, Mr. Brewer," he said, checking and handing it up the height of the three concrete steps. He squinted against the sun up at the chunky, adult body in blue wash slacks and T-shirt and the square-boned face under short red hair. "We're having a P.T.A. carnival at school, tonight. You coming?"

"I guess not tonight, Tommy," said Jim.

"They're going to have a shooting gallery," said Tommy, and hurried on to the neighbors.

Jim, turning, went back through the screen door into the living room.

"Something?" called Nancy, from the kitchen. He went on into her, still carrying the paper. She was standing by the sink, peeling potatoes for the casserole of a Friday dinner, the transparent, tight-tied apron making her look slimmer and blonder and younger—like a new bride just beginning to play housewife.

"What?" Jim asked.

"I heard you talking." She looked aside and up at him.

"Just the paper boy," he said. "Wanted to know if we're going to a P.T.A. party at the school, tonight."

She laughed cheerfully.

"Tell him to wait until Joey's old enough for school. Then we'll go to all the P.T.A. parties."

"If we can afford it." Jim batted the paper idly against the refrigerator. "It's a fund-raising deal, of course. You have to spend—nickles and dimes, but it adds up."

She watched him.

"Worrying, hon?" she asked. He shook his head; then grinned at her.

"Just thinking. A week of filling prescriptions and selling home permanent-wave kits doesn't add up to much. A two-year-old house like this—a three-year-old car—and what's left over? A lot of running just to stand still."

"You'll have your own drug store, some day."

"Some day is right."

She finished off the potato in her hands without taking her eyes off him.

"You're hungry," she said. "Go sit down. Dinner'll be ready soon."

"All right." He went back into the living room, opening the paper as he went. He was just sitting down in the green armchair across from the television when the doorbell chimed.

"I'll get it," he called to the kitchen. Nancy did not answer. Just as he had called, Jim had heard the back door slam, and the noise of their son, Joey, and Pancho, the family cocker, was filling the kitchen air.

Jim approached the front door and saw through the screen the dark faces of two slim, middle-aged men, tall in business suits. The Community Fund, thought Jim, remembering suddenly that this was the week of their drive for a new hospital.

"May we come in?" asked the taller of the two.

"Sure, come on in," Jim opened the screen for them and led the way to the living room. He was turning over in his head the possible amounts he would have to subscribe. "Sit down." The two men sat side by side on the sofa. "What can I do for you?"

"My name is Long," said the taller one. "And this is White."

"Pleased to meet you." Jim half-rose from his own chair to shake hands with both of them. They looked enough alike, he thought, to be brothers.

"Mr. Brewer," said Long, "you have a dog in the house."

"Why, yes," answered Jim. He looked at them, suddenly frowning, and then a slight scraping noise, as of claws on a polished floor caught his eye and he turned his head to see Pancho standing in the entrance to the kitchen, head and tail up, staring at the strangers. The cocker spaniel was perfectly still and rigid, leaning forward, nose extended, almost in point. Then, slowly, with the delicate care with which he approached birds in cover, the dog began to advance. Step by slow step he came up before the two men, who had not moved, but sat watching with patient eyes. Before them he halted. Then, equally slowly, he began to back away from them, step by step, until he came up hard against Jim's legs, pressing sideways against them with hip and flank, his head still turned to the two on the couch. Through the thin material of his slacks, Jim felt Pancho's whole body trembling.

"Easy, boy," said Jim, automatically, putting his hand on the furry head. "Easy." He stared at the two; and then suddenly a coldness ran down the narrow line of his spine and he felt the fine hairs on his own neck begin to rise as his body tensed in the chair. He was watching the two faces, so much alike, and he saw them now as motionless and impersonal as masks.

"Yes," said the one called Long. "You see that we aren't human."

Jim said nothing. But he could hear the sound of Nancy and Joey's voices in the kitchen and he was slowly, as slowly as Pancho had moved, shifting the weight of his body forward in the chair, so that it would be over the bone and muscle springs of his knees.

"Please," said the one introduced as White. "There's nothing for you to be afraid of. We won't harm you. And you can't harm us. We only want to talk to you."

Jim was poised now. He was thinking that he could leap forward and yell at the same time. But there was the danger that Nancy and Joey would only be bewildered by his shout and come instead into the living room to see what was the matter.

"What about?" said Jim.

"You've been chosen," said Long, "at random. Not entirely at random, but mainly so, to answer a question for us. That's all there is to it." He looked into Jim's eyes; and Jim had the impression that he smiled suddenly and warmly, although Long's lips did not move, or any part of his face. "It's a question that concerns your interests, only, not ours. Only you ought to get over being afraid of us. Here—"

He extended his hand toward Pancho. He did not snap his fingers or beckon in any way, but merely held out his fingers, waiting. And after a slow, still movement, the dog began to move, step by step away from the comfort of Jim's legs and toward the stranger. He approached the hand as he might approach a new dog in the neighborhood, stiffly and with caution. For a long second, with neck outstretched, he sniffed at the fingers—and then, with a change as dramatically sudden as the snapping of a violin string, his tail wagged and he shoved his head forward onto the hand of Long.

Long brought forward his other hand and scratched Pancho between the ears. He looked up at Jim.

"You see?" he said.

"That's a dog," said Jim; but he had relaxed, none the less. Not completely, but relaxed. "Well, what is it?"

"Did you ever think much about ethics, Mr. Brewer?" said Long, still petting Pancho.

"Ethics?" Jim looked from one to the other of them.

"Perhaps you might call it morality," said White. "The duty of morality. The duty to your neighbor."

"We get a lot of that here," said Jim, thinking of the P.T.A. and the Community Fund and all the many other drives and collections.

"You have a lot," said White. "But did you ever think much about it?"

"You don't think about things like that," said Jim, still watching them. "You just do them."

"But," said White, "there are two sides to that coin. The coin called charity."

"What do you mean?" said Jim. He looked from White to Long, who was still holding Pancho's head in one slim palm, and stroking between Pancho's ears now, with the other. The dog's eyes were closed in an ecstasy of pleasure.

"We're talking," said Long, suddenly, "about the ethics of Charity. If your dog here were lost far from your home, and trying to find his way back—if he were obviously hungry, you'd think someone else was a good person, if he or she fed him?"

"Certainly," said Jim.

"And what if the dog were interested only in getting back to you. Would it still be a kindness to tie him up until he did eat? And perhaps force him to stay, in an effort to feed him up again?"

"That's what we'd call a mistaken kindness," said Jim. "Look, what's the point of all this?"

"The point is the ethics of Charity," said Long, "and that we feel the same way about them you do. Charity isn't a kindness when the one receiving it doesn't really want it. It's an instinct among civilized people to give help—but the instinct can be mistaken."

"I still don't get what you're driving at," said Jim.

Long let go of Pancho, who shoved a furry head forward onto his knee. He reached into his right-hand suitcoat pocket and took out something small enough to be hidden in his hand.

"Mr. Brewer," he said, "when you were very young, did you ever dream of having something—something magical that could grant all your wishes?"

Jim frowned at him.

"Doesn't everybody?"

"Everybody does," said Long. He turned his hand over and opened it out. Lying in his palm was what looked like a child's marble, a glassy small globe of swirled color, green, and rust, and white. He half-stood and passed it into Jim's automatically receiving hand. "There you are."

"There I am, what?" demanded Jim, staring at it.

"There you have your wish-granter," said Long.

Jim looked back up into the dark face of the slim man and smiled a little.

"No," said Long. "It's quite true. Close your hand on it and wish."

Jim looked back at the marble. The others waited. Long had gone back to petting Pancho.

"No, I don't think so," said Jim, handing the marble back. Long accepted it, put it back in his pocket. They both stood up, and went toward the door.

"Wait," said Jim, getting up himself. "You're going?"

"We took it you had answered us," said White.

"No, wait—" said Jim. "Come on back. Let me see that again."

The two of them returned to the couch and sat down. Long passed over the marble. Jim took it, sitting back down himself, and turned it over curiously in his fingers."

"Anything?" he said.

Once more Jim had the impression of a smile from the unmoving countenance of Long.

"Almost anything," he said. "The almost doesn't have to concern you."

Slowly, Jim closed his hand over the marble. He squeezed his eyes shut and thought. He opened them again.

He was standing in the drugstore where he worked. A middle-aged woman customer was just walking out past him, filling his nostrils with an invisible cloud of her cologne. Behind the drugs and toiletries counter Dave Hogart, the owner, was looking up at him, his face wrinkled in surprise.

"Jim. I didn't see you come in. What're you doing back down here?" he said.

"Uh . . . aspirin," said Jim. "Fifty of the kid aspirin, Dave. Joey's got a slight cold."

Dave turned and reached to an upper shelf, turned back and handed Jim the bottle. He rang it up on the charge key of the cash register, the fingers of his left hand resting swollen and hunched on the bare counter beside the register.

"How's the arthritis?" Jim found himself asking, suddenly.

Dave jerked his head up with a grin.

"Not bad enough to make me want to retire yet," he said. "Want to buy the store?"

"Wish I could," said Jim.

"I guess we're going to be ready to make that deal about the same time," said Dave. "Hope Joey's all right in the morning—" Another customer was coming into the store. "See you, Jim." He moved off.

Both their backs were turned. Jim closed his hand on the marble and wished again.

He was back in his own living room. He sat down again in his chair and noticed the small transparent bottle of orange-colored tablets was still in his hand. He set it carefully down on the coffee table by his chairside and looked up. Long and White were still sitting, watching him.

"I don't understand," said Jim. "I just don't understand."

Long pointed to the hand of Jim's that still held the marble.

"That," he said, "isn't important. We only wanted something to show you, something to convince you with. The whole story's much bigger."

Jim glanced suddenly toward the kitchen entrance and the voices of Joey and Nancy coming through it.

"Don't worry," said White. "They won't think to come in until we're through here."

"You see," said Long. "We don't come from anywhere near the family of worlds that go around your sun. But we couldn't help discovering you people, when you started doing things. We've been watching you for some years now. You people are like we were—a long time back on our own world. You have the same troubles, the same sorrows, much the same hopes. You remind us very much of us, in the beginning."

"You're that much like us?" said Jim, dazedly.

"Well, not so much as you might think just by looking at us—and again, much more so than you would realize in ways you've yet to learn about," said Long. "The point is, we look at you—with your conflicts, your diseases, your pains and famines—all your lacks. And many of them are things we can do something about. We could heal your sick, we can give you longer and more useful lives. We can help you to go out among the stars and find more living room. We could open up great new fields of opportunity for you."

"Well," said Jim, looking from one to the other, "why tell me about this? Why don't you?"

"Because we're not sure it would be right," said White. "We're not sure you want our help."

"For those things?" said Jim. "Are you crazy? Of course we do."

"Are you sure?" said Long.

They sat watching him; and Jim

stared back at them. The moment stretched out long between them.

"Of course I'm sure," said Jim at last.

"I hope so," said White. "Because the decision is up to you."

Jim jerked his gaze suddenly over to look at White.

"Us?" he said.

"No," answered White, knitting his long fingers together in his lap. "Just you, you alone."

"Me?" cried Jim, and then checked his voice to hold it down below a level that would carry into the kitchen. He stared at them. "Just me? Why? Why, *me?"*

"We picked you at random and on purpose," said White. "We think you are most likely to give us the truest answer."

"But you don't want me!" said Jim, turning to Long. "I'm nobody to make a decision for the whole world! Look, there's the President. Or the United Nations—"

"You see," said Long, patiently, "the question isn't a logical one. It isn't an intellectual one, to be investigated by charts and speeches and discussions. It's an emotional question, dealing with deep and basic instincts. It isn't *what* help we can give you, it's—do you *want* help? Any help? Help of any kind?"

He stopped speaking and waited. Jim did not say anything.

"Are you still so sure?" asked White, gently.

Jim sagged slowly back in his chair. He turned his head slowly and looked at the aspirin bottle. Beyond it, the window was just beginning to tint with the first translucency of twilight. Slowly, he shook his head.

"I don't know," he said, in a low voice. "I don't know."

"You can think it over," said White. "Take tonight and think about it. We can come back for your answer, tomorrow."

"I'm not the man," said Jim, weakly. "I'm not the man to ask—something like that."

"You are the man," said Long, as they got up, "because we picked you to be the man."

Jim rose also. The faces of all three of them were very close together. He felt their alienness now, more strongly than at any earlier moment since they had come in.

"Let me help you with a little advice," said Long. "Forget that you're deciding for a world. Don't try to think of how all the rest will feel. Decide only for yourself. I promise you, what you sincerely feel, the great and lasting part of your people, those who work and marry and have children and endure, will feel the same."

They turned away from him and went through the screen door into the strong glare of the sunset. Jim heard the screen door slam quietly behind them.

"Dinner's ready!" called Nancy, from the kitchen.

Incredibly, he actually forgot about it during the general chatter and excitement of dinner. It was only later, after Joey had been put to bed and he and Nancy were sitting in the living room watching television, that it all came back to him. He waited until the western they happened to be watching came to its noisy climax and then got up from his chair.

"I've got some letters to write," he told Nancy.

He went into the extra bedroom, that they called the office, and shut the door. He sat down in the chair before the card table that did service as a desk and turned on the lamp. Its light shone warmly at the bookcases and second-hand overstuffed chair that had been their first furniture purchase for the apartment he and Nancy had moved into after their honeymoon. He got out his fountain pen, the notepaper and envelopes—and then took the marble once more from his pocket and laid it on the white sheet of paper before him. It glowed back up at him, reflecting the lamplight.

"I've got to think this thing out," he told himself.

But no thoughts came. Once he closed his hand around the marble hesitantly, but then let go of it again without using it. He tried to imagine what the world would be like if he should tell Long and White that his answer was yes. No hospitals, different kinds of cars, he supposed—he was not very good at this kind of imagining. If everybody had everything they needed, what about money—and jobs.

He checked suddenly. Funny it had not occurred to him before. Of course, his own job would be one of the first to go. Well people wouldn't need

medicine. And as for all the rest of the stuff a drugstore sold, beauty aids and the rest, there would probably be new versions that would last for a lifetime. Magazines would probably be left, candy, ice cream, toys . . . What would happen to Nancy and Joey if he had no job? What would eventually happen to him?

But he was forgetting. Under the new set-up they wouldn't want for things they needed. No need to worry there. But what would he do? He couldn't just sit around for the rest of his life. Or could he? There were things he'd always wanted to do, like deep-sea fishing and places he'd always wanted to go. But would that be enough?

On second thought, there would probably be thousands of new jobs opening up. Long and White obviously belonged to a people who had work to do. Perhaps there would be something he would like better than pharmacy, something that would give him a feeling of really getting somewhere, making progress . . .

After some while, he glanced at his watch. It was almost eleven; he had been sitting here close to two hours. And nothing was decided. He stood up, feeling the weight and weariness of his own body. His eyes smarted from staring at the light reflected from the blank white paper before him. He put everything away, turned out the lamp and went to his and Nancy's bedroom.

Nancy was already in bed and reading the newspaper. She looked up as he came in.

"What time do you go in the morning?" she asked.

"Not until noon," he said. "Dave's opening up tomorrow." He took off his shirt and went about the business of getting ready for sleep. Nancy put the paper away on the shelf underneath the night table beside their double bed. She yawned and slid down under the covers.

"I've got to take Joey shopping tomorrow," she said. "He's just bursting out of his socks."

"Yes," he said. He turned out the light and got into bed. The peaceful darkness washed in around him. He lay there, slowly breathing. There was a movement under the covers and he felt Nancy's hand touch gently upon his arm.

"What's wrong?" she asked softly.

He sighed, deeply and gustily; and, turing toward her, he told her, the whole story about White and Long, and all that they had said and done.

Nancy always had been a good listener. She listened now, without interrupting him with questions, her face a pale blur in the little light filtering in around the edges of the window shades. Toward the end of it they were both sitting up in bed; and Jim got up to turn on the light and retrieve the marble from his pants' pocket. He brought it back to her and got into bed again.

She took it from his hand and turned it over in her own fingers. The light from their bedstand lamp caught and glinted from its surface, making the three colors seem to flow as she turned it, as if they were being stirred about within a transparent shell. She looked at Jim.

"Could I?" she said. "Do you suppose—"

"Go ahead," said Jim.

She closed her fingers about the marble and closed her eyes. A fur stole appeared on the blanket before them. Nancy opened her eyes again.

"Oh!" she said, on a little intake of breath. She reached and touched the fur with a feather touch, stroking it almost imperceptibly with the ends of her fingers. She got up suddenly, climbing over Jim, who was on the outside of the bed, carrying the stole, and went to the mirror of her dressing table. She put the stole around her neck and held it there with both hands, gazing into the mirror. Watching her, standing there in her nightgown with the fur around her, Jim felt a sudden ridiculous tightening in his throat.

"Nancy," he said.

She turned about and came back to the bed, climbing in again and reaching for the marble. As her hand closed about it, the fur vanished.

"Nancy!" said Jim. "You didn't have to do that. You can keep it."

"If you decide, I'll get it back," she said. Without warning she kissed him on the cheek. "Thank you, darling."

"I didn't do anything," said Jim.

"Thank you for saying I could keep it."

He squeezed her hand in his; but he still frowned at the marble lying before them on the blanket.

"What'll I do? What'll I do?" he murmured.

He felt the light touch of her hand on his shoulder.

"Why don't you sleep on it," she said. "You'll think better in the morning."

"All right," he sighed. "I'll try. Only I don't think I can."

But he did sleep. He had not known how tired he was and unconsciousness had flooded in on him almost in the moment in which he closed his eyes. Only with sleep came the dreams, a multitude of them—vast confused fantasies of enormous ships that sailed above cities under hothouse domes. And houses unroofed to the ever-present air, beneath the domes. And people at work with shining machines whose purpose he could not comprehend.

Then, later on, the dreams changed back to the ordinary world; and there came the only one that he was ever to remember clearly afterward. In it he stood on the customer's side of a counter in the drugstore where he worked; and facing him on the counter's other side was Joey, in a white pharmacist's jacket. Joey, grown to a man now. A young man, but with the hair already receding on his forehead and tired lines of premature age on his face; and the drug store about him was dingier and more shabbier than Jim remembered. Joey handed him a bottle filled with small, pink, children's aspirin.

"Take this to my boy," Joey was saying. "It's not much, but it's the best we have."

Jim took it from him; and as Jim did so, he noticed that Joey's fingers had swollen, arthritic joints as Dave's hand had. Joey saw his eyes fall on them, and took the hand away, hiding it under the counter.

"I'm sorry, Joey!" cried Jim, suddenly.

"It's not your fault," said Joey. But he had turned his head away; and would not look at his father.

Jim woke, sweating.

He lay flat on his back on his side of the bed. Beside him, Nancy slept sweetly, breathing silently, with her face pressed against her pillow. Pale lines of beginning dawnlight were marking the windows around the edges of the pulled window shades.

Jim breathed deeply; and slowly, quietly, got up out of the bed. He dressed while Nancy continued to sleep, looking over at the alarm clock on the night table. Its white hands stood at the black numerals that told him it was five-thirty, an hour and a half before the alarm was due to go off. Dressed at last in slacks and shirt, he went out through the silent living room to the front door, opened it, and went down the steps onto the front walk.

He stopped, breathing in the fresh morning air and looking at the sky. It was as cloudless as clear water and the new rays of the morning sun made it scintillate as if it was possessed of a light of its own. The lawns up and down the block on either side of him and across the street glittered greener than ever with the night's dew. The other houses all seemed sleeping; but as he watched Chuck Elison came out of his kitchen door five doors down on the street's other side and climbed into his panel truck with "Elison Plumbing" painted on its side. Chuck's wife, Jean, came out the kitchen door to stand in her apron and wave at him as he backed down his driveway, turned the truck up the street, and drove off. She went back into their house.

Jim turned slowly from his gazing at the street, to look at his own house. The yellow trim around the screens and windows was beginning to flake a little. He should repaint before the heat of the summer months really got under way. And the grass would need cutting, soon—by Sunday, anyway.

Under the picture window of the living room the early tulips were in bloom, the yellow tips of their scarlet petals forming neat, scallop-edged cups. He reached out a forefinger, bemused, to touch one. He could not remember, just now, seeing any flowers in his dreams of the domes and ships. Undoubtedly they had been there, but—never had he felt before how beautiful these small plants were. . .

A slight sound of shoes on the sidewalk behind him made him straighten and turn. Long stood there alone, the morning sun lighting up his strange, dark face. For a moment they merely looked at each other saying nothing. Then Long spoke.

"Do you want more time?" he asked.

Jim sighed. Once more he looked around the street on both sides of him.

"No," he said. Slowly he put his hand into the right-hand pocket of his slacks. The marble was there. He took it out and handed it over to Long.

Long took it and put it back in his own pocket.

"You're sure?" he asked, looking closely at Jim.

"I think," said Jim, and sighed again, "we ought to get it for ourselves."

Long nodded, thoughtfully. He was turning to go when Jim stopped him.

"Was that the right answer?" Jim asked.

Long hesitated. For a second there seemed to be something strange and sad, but at the same time warm and friendly behind his eyes; but it was gone too quickly for Jim to pin it down.

"That's not for me to say," he said. And then, astonishingly, he did smile—for the first and only time; and the smile lit up his face like sunset after a storm has blown away. "But ask your grandson."

And, suddenly, as shadow, he was gone.

THE END

IN TIMES TO COME

Next month's issue features a long novelette by H. Beam Piper, "Ministry of Disturbance." For a man without conscience or sense of responsibility, it's always easy to get out of a job; of course, it's conventional nowadays to hold that nobody *really* has a conscience—people just force individuals to behave halfway decently. But . . . how about the absolute and hereditary ruler of the galaxy? Who makes him behave? Who keeps him on the job . . .?

Also, there's a symbolic cover by Ed Emsh, an essay, in pictographic form, on the problems of trading between Earth and Earth's colonies. This old proposition "You can't change human nature," now; what, exactly, do you mean? Does it mean Man can't adapt to a high-gravity planet? And what happens to his "human" nature if he does?

THE EDITOR.

UNHUMAN

DAMN! He's actually doing it. Do you hear that?"

A ray of sunlight and a distant voice filtered down from the open arch in the control room above. The distant voice talked and paused, talked and paused. The words were blurred, but the tone was recognizable.

"He's outside preaching to the natives."

The two engineers were overhauling the engines but paused to look up toward the voice.

"Maybe not," said Charlie, the junior engineer. "After all, he doesn't know their language."

"He'd preach anyway," said Henderson, senior engineer and navigator. He heaved with a wrench on a tight bolt, the wrench slipped, and Henderson released some words that made Charlie shudder.

On the trip, Charlie had often dreamed apprehensively that Henderson had strangled the passenger. And once he had dreamed that he himself had strangled the passenger and Henderson, too.

When awake the engineers carefully avoided irritating words or gestures, remained cordial towards each other and the passenger no matter what the temptation to snarl, and tried to keep themselves in a tolerant good humor.

It had not been easy.

Charlie said, "How do you account for the missionary society giving him a ship of his own? A guy like that, who just gets in your hair when he's trying to give you advice, a guy with a natural born talent for antagonizing people?"

"Easy," Henderson grunted, spinning the bolt. He was a stocky, square-built man with a brusque manner and a practiced tolerance of other people's oddities. "The missionary society was trying to get rid of him. You can't get any farther away than they sent us!"

The distant voice filtered into the control room from the unseen sunlit landscape outside the ship. It sounded resonant and confident. "The poor jerk thinks it was an honor," Henderson added. He pulled out the bolt and dropped it on the padded floor with a faint thump.

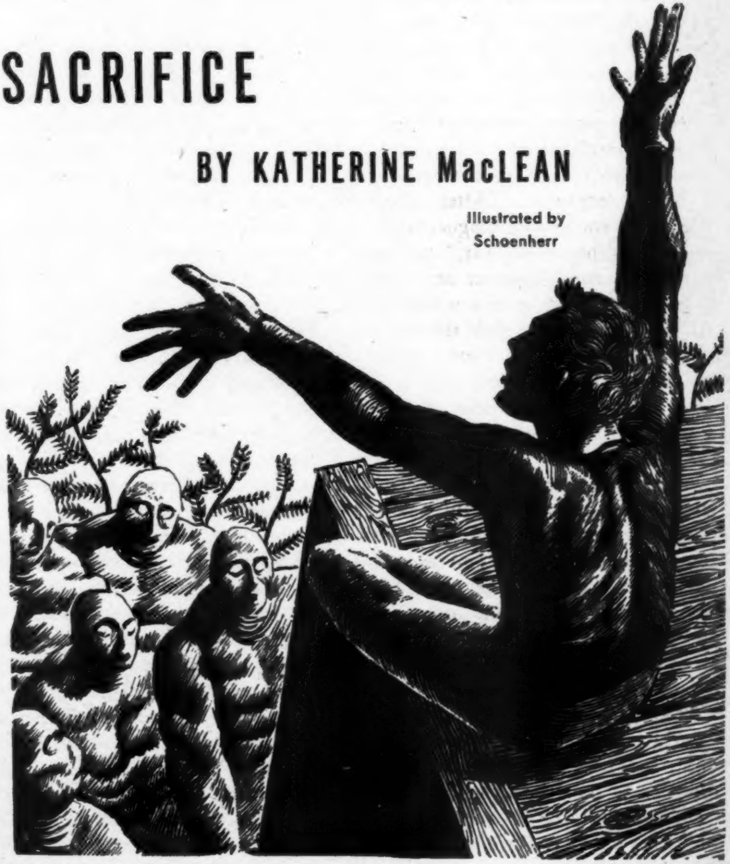
"Anyhow," Charlie said, loosening bolt heads in a circle as the manual instructed, "he can't use the translator machine. It's not ready yet, not until we get the rest of their language. He

Superstition—meaningless rituals—pointless cruelties—these things may, at times, be somewhat less than "obvious," when a "man" isn't quite human.

UNHUMAN SACRIFICE

BY KATHERINE MacLEAN

Illustrated by
Schoenherr



won't talk to them if they can't understand."

"Won't he?" Henderson fitted his wrench to another bolt and spun it angrily. "Then, what is he doing?"

Without waiting for an answer he replied to his own question. "*Preaching*, that's what he is doing!"

It seemed hot and close in the engine room, and the sunlight from outside beckoned.

Charlie paused and wiped the back of his arm against his forehead. "Preaching won't do him any good. If they can't understand him, they won't listen."

"We didn't listen, and that didn't stop him from preaching to *us!*" Henderson snapped. "He's lucky we found a landing planet so soon, he's lucky he didn't drive us insane first. A man like that is a danger to a ship." Henderson, like Charlie, knew the stories of ships which had left with small crews, and returned with a smaller crew of one or two red-eyed maniacs and a collection of corpses. Henderson was a conservative. He preferred the regular shipping runs, and ships with a regular sized crew and a good number of passengers. Only an offer of triple pay and triple insurance indemnity had lured him from the big ships to be co-engineer on this odd three-man trip.

"Oh . . . I didn't mind being preached at," Charlie's tone was mild, but he stared upward in the direction of the echoing voice with a certain intensity in his stance.

"Come off it, you twerp. We only have to be sweet to each other on a trip when we're cabin-bound. Don't kid old Harry, you didn't like it."

"No," said Charlie dreamily, staring upward with a steady intensity. "Can't say that I did. He's not such a good preacher. I've met better in bars." The echoing voice from outside seemed to be developing a deeper echo. "He's got the translator going, Harry. I think we ought to stop him."

Charlie was a lanky redhead with a mild manner, about the same age as the preacher, but Henderson, who had experience, laid a restraining hand on his shoulder.

"I'll do it," said Henderson, and scrambled up the ladder to the control room.

The control room was a pleasant shading of grays, brightly lit by the sunlight that streamed in through the open archway. The opening to the outside was screened only by a billowing curtain of transparent saran-type plastic film, ion-coated to allow air to pass freely, but making a perfect and aseptic filter against germs and small insects. The stocky engineer hung a clear respirator box over a shoulder, brought the tube up to his mouth, and walked through the plastic film. It folded over him and wrapped him in an intimate tacky embrace, and gripped to its own surface behind him, sealing itself around him like a loose skin. Just past the arch he walked through a frame of metal like a man-sized croquet wicket and stopped while it tightened a noose around the trailing films of plastic behind him, cutting him free of the doorway curtain and sealing the break with heat.

Without waiting for the plastic to finish wrapping and tightening itself around him, the engineer went down the ramp, trailing plastic film in gossamer veils, like ghostly battle flags.

They could use this simple wrapping of thin plastic as an airsuit air lock, for the air of the new world was rich and good, and the wrapping was needed only to repel strange germs or infections. They were not even sure that there were any such germs; but the plastic was a routine precaution for ports in quarantine, and the two engineers were accustomed to wearing it. It allowed air to filter by freely, so that Henderson could feel the wind on his skin, only slightly diminished. He was wearing uniform shorts, and the wind felt cool and pleasant.

Around the spaceship stretched grassy meadow and thin forest, and beyond that in one direction lay the blue line of the sea, and in another the hazy blue-green of distant low mountains. It was so like the southern United States of Charlie's boyhood that the young engineer had wept with excitement when he first looked out of the ship. Harry Henderson did not weep, but he paused in his determined stride and looked around, and understood again how incredibly lucky they had been to find an Earth-type planet of such perfection. He was a firm believer in the hand of fate, and he wondered what fate planned for the living things of this green planet, and why it had chosen him as its agent.

Down in the green meadow, near the foot of the ramp sat the translator machine, still in its crate and on a wheeled dolly but with one side opened to expose the controls. It looked like a huge box, and it was one of the most expensive of the new inductive language analyzers, brought along by their passenger in the hope and expectation of finding a planet with natives.

Triumphant in his success, the passenger, the Revent Winton, sat cross-legged on top of the crate, like a small king on a large throne. He was making a speech, using the mellow round tones of a trained elocutionist, with the transparent plastic around his face hardly muffling his voice at all.

And the natives were listening. They sat around the translator box in a wide irregular circle, and stared. They were bald, with fur in tufts about their knees and elbows. Occasionally one got up, muttering to the others, and hurried away; and occasionally one came into the area and sat down to listen.

"Do not despair," called Revent Winton, in bell-like tones. "Now that I have shown you the light, you know that you have lived in darkness and sin all your lives, but do not despair . . ."

The translator machine was built to assimilate a vast number of words and sentences in any tongue, along with fifty or so words in direct translation, and from that construct or find a grammatical pattern and print a handbook of the native language. Meanwhile, it would translate any word it was sure of. Henderson figured out the meaning of a few native words the day before and recorded them in, and the machine was industriously translating those few words whenever they appeared, like a deep bell, tolling the antiphony to the preacher's voice. The machine spoke in an enormous bass that was Henderson's low tones recorded through a filter and turned up to twenty times normal volume.

"I . . . LIGHT . . . YOU . . . YOU . . . LIVED . . . DARK . . . LIFE . . ."

The natives sat on the green grass and listened with an air of patient wonder.

"Revent Winton," Harry tried to attract his attention.

Winton leaned toward the attentive natives, his face softened with forgiveness. "No, say to yourselves merely—I have lived in error. Now I will learn the true path of a righteous life."

The machine in the box below him translated words into its voice of muted thunder. "SAY YOU . . . I . . . LIVED . . .I . . . PATH . . . LIFE . . ."

The natives moved. Some got up and came closer, staring at the box, and others clustered and murmured to each other, and went away in small groups, talking.

Henderson decided not to tell the Revent what the machine had said. But this had to be stopped.

"Revent Winton!"

The preacher leaned over and looked down at him benevolently. "What is it, my son?" He was younger than the engineer, dark, intense and sure of his own righteousness.

"MY SON," said the translator machine in its voice of muted thunder. The sound rolled and echoed faintly back from the nearby woods, and the natives stared at Henderson.

Henderson muttered a bad word. The natives would think he was Winton's son! Winton did not know what it had said.

"Don't curse," Winton said patiently. "What is it, Harry?"

"Sorry," Henderson apologized, leaning his arms on the edge of the crate. "Switch off the translator, will you?"

"WILL YOU . . ." thundered the translator. The preacher switched it off.

"Yes?" he asked, leaning forward. He was wearing a conservative suit of knitted dark gray tights and a black shirt. Henderson felt badly dressed in his shorts and bare hairy chest.

"Revent, do you think it's the right thing to do, to preach to these people? The translator isn't finished, and we don't know anything about them yet. Anthropologists don't even make a suggestion to a native about his customs without studying the whole tribe and the way it lives for a couple of generations. I mean, you're going off half cocked. It's too soon to give them advice."

"I came to give them advice," Winton said gently. "They need my spiritual help. An anthropologist comes to observe. They don't meddle with what they observe, for meddling would change it. But I am not here to observe, I am here to help them. Why should I wait?"

Winton had a remarkable skill with syllogistic logic. He always managed to sound as if his position were logical, somehow, in spite of Henderson's conviction that he was almost always entirely wrong, Henderson often, as now, found himself unable to argue.

"How do you know they need help?" he asked uncertainly. "Maybe their way of life is all right."

"Come now," said the preacher cheerfully, swinging his hand around the expanse of green horizon. "These are just primitives, not angels. I'd be willing to guess that they eat their own kind, or torture, or have human sacrifices."

"Humanoid sacrifices," Henderson muttered.

Winton's ears were keen. "Don't quibble. You know they will have some filthy primitive custom or other. Tribes on Earth used to have orgies and sacrifices in the spring. It's spring here—the Great Planner probably intended us to find this place in time to stop them."

"Oye," said Henderson and turned away to strike his forehead with the heel of his hand. His passenger was planning to interfere with a spring fertility ceremony. If these natives held such a ceremony—and it was possible that they might—they would be convinced that the ceremony insured the fertility of the earth, or the health of the sun, or the growth of the crops, or the return of the fish. They would be convinced that without the ceremony, summer would never return, and they would all starve. If Winton interfered, they would try to kill him.

Winton watched him, scowling at the melodrama of his gesture.

Henderson turned back to try to explain.

"Revent, I appeal to you, tampering is dangerous. Let us go back and report this planet, and let the government send a survey ship. When the scientists arrive, if they find that we have been tampering with the natives' customs without waiting for advice, they will consider it a crime. We will be notorious in scientific journals. We'll be considered responsible for any damage the natives sustain."

The preacher glared. "Do you think that I am a coward, afraid of the anger of atheists?" He again waved a hand, indicating the whole sweep of the planet's horizon around them. "Do you think we found this place by accident? The Great Planner sent me here for a purpose. I am responsible to Him, not to you, or your scientist friends. I will fulfill His purpose." He leaned forward, staring at Henderson with dark fanatical eyes. "Go weep about your reputation somewhere else."

Henderson stepped back, getting a clearer view of the passenger, feeling as if he had suddenly sprouted fangs and claws. He was still as he had appeared before, an intense, brunet young man, wearing dark tights and dark shirt, sitting cross-legged on top of a huge box, but now he looked primitive somehow, like a prehistoric naked priest on top of an altar.

"Anthropology is against this kind of thing," Henderson said.

Winton looked at him malevolently from his five foot elevation on the crate and the extra three feet of his own seated height. "You aren't an anthropologist, are you Harry? You're an engineer?"

"That's right," Henderson admitted, hating him for the syllogism.

Winton said sweetly: "Then why don't you go back to the ship and work on the engine?"

"There will be trouble," Henderson said softly.

"I am prepared for trouble," the Revent Winton said equally softly. He took a large old-fashioned revolver out of his carry case, and rested it on his knee.

The muzzle pointed midway between the engineer and the natives.

Henderson shrugged and went back up the ramp.

"What did he do?" Charlie was finishing his check of the fuel timers, holding a coffee cup in his free hand.

Angrily silent, Harry cut an exit slit from the plastic coating. He ripped off the gossamer films of plastic, wadded them up together and tossed them in a salvage hopper.

"He told me to mind my own business. And that's what I am going to do."

The preacher's impressive voice began to ring again from the distance outside, and, every so often, like a deep gong, the translator machine would speak a word in the native dialect.

"The translator is still going," Charlie pointed out.

"Let it. He doesn't know what it is saying." Sulkily, Henderson turned to a library shelf, and pulled out a volume: "The E. T. Planet, a manual of observation and behavior on extraterrestrial planets, with examples."

"What is it saying?"

"Almost nothing at all. All it translated out of a long speech the creep made was "I life path."

The younger engineer lost his smile. "That was good enough for others. Winton doesn't know what the box is saying?"

"He thinks it's saying what he is saying. He's giving out with his usual line of malarky."

"We've got to stop it!" Charlie began to climb the ladder.

Henderson shrugged. "So go out and tell him the translator isn't working right. I should have told him. But if I got close to him now, I'd strangle him."

Charlie returned later, grinning. "It's O.K. The natives are scared of

Winton, and they like the box; so they must think that the box is talking sense for itself, and Winton is gibbering in a strange language."

"He is. And it is." Henderson said sourly. "They are right."

"You're kind of hard on him." Charlie started searching the shelves for another copy of the manual of procedure for survey teams. "But I can see what you mean. Anyhow, I told Winton that he was making a bad impression on the natives. It stopped him. It stopped him cold. He said it would put off preaching for a week and study the natives a little. But he said we ought to fix up the translator, so that it translates what he says." Charlie turned, smiling, with a book in one hand "That gives us time."

"Time for what?" Henderson growled without looking up from his book. "Do you think we can change Winton's mind? That bonehead believes that butting into people's lives is a sacred duty. Try talking any bonehead out of a Sacred Duty! He'd butt into a cannibal banquet! I hope he does. I hope they eat him!"

"Long pig," Charlie mused, temporarily diverted by the picture. "Tastes good to people, probably would taste foul to these natives, they're not the same species."

"He says he's planning to stop their spring festival. If it has sacrifices or anything he doesn't like, he says he'll stop it."

Charlie placed his fists on the table and leaned across toward Henderson, lowering his voice. "Look, we don't know even if the natives are going to have any spring festival. Maybe if we investigate we'll find out that there won't be one, or maybe we'll find out that Winton can't do them any harm. Maybe we don't have to worry. Only let's go out and investigate. We can write up reports on whatever we find, in standard form, and the journals will print them when we get back. Glory and all like that." He added, watching Henderson's expression: "Maybe, if we have to, we can break the translator."

It was the end of the season of dry. The river was small and ran in a narrow channel, and there were many fish near the surface. Spet worked rapidly, collecting fish from fish traps, returning the emtpy traps to the water, salting the fish.

He was winded, but pleased with the recollection of last night's feast, and hungry in anticipation of the feast of the evening to come. This was the season of the special meals, cooking herbs and roots and delicacies with the fish. Tonight's feast might be the last he would ever have, for a haze was thickening over the horizon, and tomorrow the rains might come.

One of the strangers came and watched him. Spet ignored him politely and salted the fish without looking at him directly. It was dangerous to ignore a stranger, but to make the formal peace gestures and agreements would be implying that the stranger was from a tribe of enemies, when he might already be a friend. Spet preferred to be polite, so he pretended not to be concerned that he was being watched.

The haze thickened in the sky, and the sunlight weakened. Spet tossed the empty trap back to its place in the river with a skillful heave of his strong short arms. If he lived through the next week, his arms would not be strong and short, they would be weak and long. He began to haul in another trap line, sneaking side glances at the stranger as he pulled.

The stranger was remarkably ugly. His features were all misfit sizes. Reddish brown all over like a dead leaf, and completely bald of hair at knees and elbows, he shone as if he were wet, covered all over with a transparent shininess, like water, but the water never dripped. He was thick and sturdy and quick moving, like a youngling, but did not work. Very strange, unlike reality, he stood quietly watching, without attacking Spet, although he could have attacked without breaking a peace gesture. So he was probably not of any enemy tribe.

It was possible that the undripping water was an illusion, meant to indicate that the stranger was really the ghost of someone who had drowned.

The stranger continued to watch. Spet braced his feet against the grass of the bank and heaved on the next trap line, wanting to show his strength. He heaved too hard, and a strand of the net gave way. The stranger waded out into the water, and pulled in the strand, so that no fish escaped.

It was the act of a friend. And yet when the net trap was safely drawn up on the bank, the brown stranger stepped back without comment or gesture, and watched exactly as before—as if his help was the routine of one kinfolk to another.

That showed that the brown one was his kin and a member of his family. But Spet had seen all of his live kinfolk, and none of them looked so strange. It followed reasonably that the brown one was a ghost, a ghost of a relative who had drowned.

Spet nodded at the ghost and transferred the fish from the trap to the woven baskets and salted them. He squatted to repair the broken strand of the net.

The brown ghost squatted beside him. It pointed at the net and made an inquiring sound.

"I am repairing the trap, Grandfather," Spet explained, using the most respectful name for the brown ghost relative.

The ghost put a hand over his own mouth, then pointed at the ground and released its mouth to make another inquiring noise.

"The ground is still dry, Grandfather," Spet said cordially, wondering what he wanted to know. He rose and flung the trap net out on its line into the river, hoping that the brown ghost would admire his strength. Figures in dreams often came to tell you something, and often they could not speak, but the way they looked and the signs they made were meant to give you a message. The brown ghost was shaped like a youngling, like Spet, as if he had drowned before his adult hanging ceremony. Perhaps this one came in daylight instead of dreams, because Spet was going to die and join the ghosts soon, before he became an adult.

The thought was frightening. The haze thickening on the horizon looked ominous.

The brown ghost repeated what Spet had said, almost in Spet's voice, blurring the words slightly. *The ground is still dry Grandfather.* He pointed at the ground and made an inquiring noise.

"Ground," said Spet thinking about death, and every song he had heard about it. Then he heard the ghost repeat the word, and saw the satisfaction of his expression, and realized that the ghost had forgotten how to talk, and wanted to be taught all over again, like a newborn.

That made courtesy suddenly a simple and pleasant game. As Spet worked, he pointed at everything, and said the word, he described what he was doing, and sometimes he sang the childhood work songs, that described the work.

The ghost followed and helped him with the nets, and listened, and pointed at things he wanted to learn. Around his waist coiled a blind silver snake that Spet had not noticed at first, and the ghost turned the head of the snake towards Spet when he sang, and sometimes the ghost talked to the snake himself, with explanatory gestures.

It was very shocking to Spet that anyone would explain things to a snake, for snakes are wise, and a blind snake is the wise one of dreams —he who knows everything. The blind snake did not need to be explained to. Spet averted his eyes and would not look at it.

The ghost and he worked together, walking up the river bank, hauling traps, salting fish, and throwing the traps back, and Spet told what he was doing, and the ghost talked down to the snake around his waist, explaining something about what they were doing.

Once the brown ghost held the blind silver snake out toward Spet, indicating with a gesture that he should speak to it.

Terrified and awed, Spet fell to his knees. "Tell me, Wisest One, if you wish to tell me, will I die in the hanging?"

He waited, but the snake lay with casual indifference in the ghost's hand, and did not move or reply.

Spet rose from his knees and backed away. "Thank you, oh Wise One."

The ghost spoke to the snake, speaking very quietly, with apologetic gestures and much explanation, then wrapped it again around his waist, and helped Spet carry the loads of salted fish, without speaking again, or pointing at anything.

It was almost sundown.

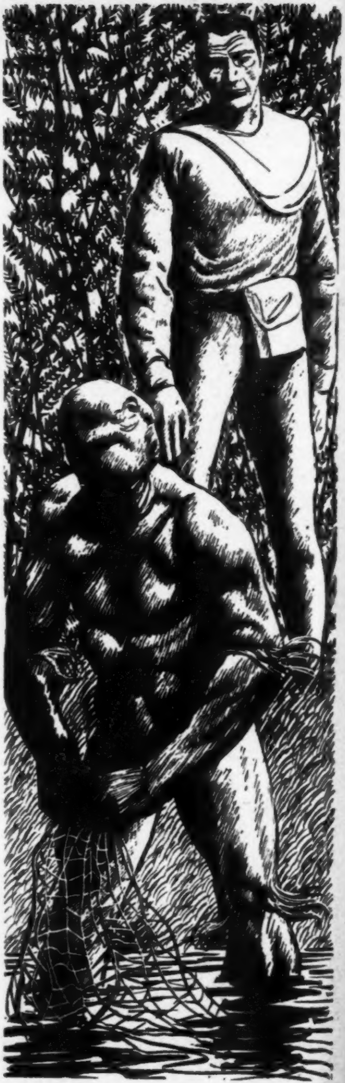
On the way back to his family hut, Spet passed the Box That Speaks.

The black gibbering spirit sat on top of it and gibbered as usual, but this time the Box stopped him and spoke to him, and called him by his own name, and asked questions about his life.

Spet was carrying a heavy load of salted fish in two baskets hung on a yoke across one sturdy shoulder. He was tired. He stood in the midst of the green meadow that in other seasons had been a river, with the silver hut of the ghosts throwing a long shadow across him. His legs were tired from wading in the river, and his mind was tired from the brown ghost asking him questions all day; so he explained the thing that was uppermost in his mind, instead of discussing fishing and weather. He explained that he was going to die. The ceremony of Hanging, by which the almost-adults became adults, was going to occur at the first rain, five younglings were ready, usually most of them lived, but he thought he would die.

The box fell silent, and the ghost on top stopped gibbering, so Spet knew that it was true, for people fall silent at a truth that they do not want to say aloud.

He made a polite gesture of leave-taking to the box, and went toward his family hut, feeling very unhappy. During the feast of that evening all the small ones ate happily of fish and roots and became even fatter, and the thin adults picked at the roots and herbs. Spet was the only youngling of adult-beginning age, and he should have been eating well to grow



fat and build up his strength, but instead he went outside and looked at the sky and saw that it was growing cloudy. He did not go back in to the feast again, instead he crouched against the wall of the hut and shivered without sleeping. Before his eyes rested the little flat-bottomed boats of the family, resting in the dust behind the hut for the happy days of the rain. He would never travel in those boats again.

Hanging upside down was a painful way to become an adult, but worth it, if you lived. It was going to be a very bad way to die.

Hurrying and breathless with his news, Revent Winton came upon the two engineers crouched at the river bank.

"I found out . . ." he began.

"Shhh" one said without turning.

They were staring at a small creature at the edge of the water.

Winton approached closer and crouched beside them. "I have news that might interest you." He held his voice to a low murmur, but the triumph sounded in it like a rasp cutting through glass, a vibration that drew quick speculative glances from the engineers. They turned their attention back to the water's edge.

"Tell us when this is over. Wait."

The young preacher looked at what they were staring at, and saw a little four-legged creature with large eyes and bright pointed teeth struggling feebly in the rising water. The younger engineer, Charlie, was taking pictures of it.

"It's feet are stuck," Winton whispered. "Why don't you help it?"

"It's rooting itself," Henderson murmured back. "We're afraid that loud noises might make it stop."

"Rooting itself?" Winton was confused.

"The animal has two life stages, like a barnacle. You know, a barnacle is a little fish that swims around before it settles down to being just kind of a lump of rock. This one has a rooted stage that's coming on it now. When the water gets up to its neck it rolls up underwater and sticks its front legs out and starts acting like a kind of seaweed. It's hind feet are growing roots. This is the third one we've watched."

Winton looked at the struggling little creature. The water was rising towards its neck. The large bright eyes and small bared teeth looked frightened and uncomprehending. Winton shuddered.

"Horrible," he murmured. "Does it know what is happening?"

Henderson shrugged, "At least it knows the water is rising, and it knows it must not run away. It has to stand there and dig its feet in." He looked at Winton's expression and looked away. "Instinct comes as a powerful urge to do something. You can't fight instinct. Usually it's a pleasure to give in. It's not so bad."

Revent Paul Winton had always been afraid of drowning. He risked another glance at the little creature that was going to turn into a seaweed. The water had almost reached its neck, and it held its head high and panted rapidly with a thin whimpering sound.

"Horrible." Winton turned his back to it and pulled Henderson farther up the bank away from the river. "Mr. Henderson, I just found out something."

He was very serious, but now he had trouble phrasing what he had to say. Henderson urged him, "Well, go on."

"I found it out from a native. The translator is working better today."

"Charlie and I just recorded about four hundred words and phrases into it by distance pickup. We've been interviewing natives all day." Henderson's face suddenly grew cold and angry. "By the way, I thought you said that you weren't going to use the translator until it is ready."

"I was just checking it." Winton actually seemed apologetic. "I didn't say anything, just asked questions."

"All right," Henderson nodded grudgingly. "Sorry I complained. What happened? You're all upset, man!"

Winton evaded his eyes and turned away, he seemed to be looking at the river, with its banks of bushes and trees. Then he turned and looked in the direction of the inland hills, his expression vague. "Beautiful green country. It looks so peaceful. God is lavish with beauty. It shows His goodness. When we think that God is cruel, it is only because we do not understand. God is not really cruel."

"All right, so God is not really cruel," Henderson repeated cruelly. "So what's new?"

Winton winced and pulled his attention back to Henderson.

"Henderson, you've noticed that there are two kinds of natives, tall, thin ones that are slow, and quick, sturdy, short ones that do all the hard work. The sturdy ones we see in all ages, from child size up. Right?"

"I noticed."

"What did you think it meant?"

"Charlie and I talked about it." Henderson was puzzled. "Just a guess, but we think that the tall ones are aristocrats. They probably own the short ones, and the short ones do all the work."

Thick clouds were piled up over the far hills, accounting for the slow rise in the river level.

"The short ones are the children of the tall thin ones. The tall thin ones are the adults. The adults are all sick, that is why the children do all the work."

"What . . ." Henderson began, but Winton overrode his voice, continuing passionately, his eyes staring ahead at the hills.

"They are sick because of something they do to themselves. The young ones, strong and healthy, when they are ready to become adults they . . . they are hung upside down. For days, Henderson, maybe for more than a week, the translator would not translate how long. Some of them die. Most of them . . . most of them are stretched, and become long and thin." He stopped, and started again with an effort. "The native boy could not tell me why they do this, or how it started. It has been going on for so long that they cannot remember."

Abruptly, and, to Henderson, shockingly, the preacher dropped to his knees and put his hands together. He tilted his head back with shut eyes and burst into prayer.

"Oh Lord, I do not know why You waited so long to help them to the true light, but I thank You that You sent me to stop this horrible thing."

Quickly he stood up and brushed his knees. "You'll help me, won't you?" he asked Henderson.

"How do we know it's true?" Henderson scowled. "It doesn't seem reasonable."

"Not reasonable?" Winton recovered his poise in sudden anger. "Come now Harry, you've been talking as if you knew some anthropology. Surely you remember the puberty ceremonies. Natives often have initiation ceremonies for the young males. It's to test their manhood. They torture the boys, and the ones who can take it without whimpering are considered to be men, and graduated. Filthy cruelty! The authorities have always made them stop."

"No one around here has any authority to order anyone else to stop," Harry grunted. He was shaken by Winton's description of the puberty ceremony, and managed to be sarcastic only from a deep conviction that Winton had been always wrong, and therefore would continue to be wrong. It was not safe to agree with the man. It would mean being wrong along with Winton.

"No authority? What of God?"

"Well, what *of* God?" Henderson asked nastily. "If He is everywhere, He was here before you arrived here. And He never did anything to stop them. You've only known them a week. How long has God known them?"

"You don't understand." The dark-haired young man spoke with total conviction, standing taller, pride straightening his spine. "It was more than mere luck that we found this planet. It is my destiny to stop these people from their ceremony. God sent me."

Henderson was extremely angry, in a white-faced way. He had taken the preacher's air of superiority in the close confine of a spaceship for two months, and listened patiently to his preaching without letting himself be angry, for the sake of peace in the spaceship. But now he was out in the free air again, and he had had his fill of arrogance, and wanted no more.

"Is that so?" he asked nastily. "Well, I'm on this expedition, too. How do you know that God did not send *me,* to stop *you?*"

Charlie finished taking pictures of the little animal under water as it changed, and came back up the bank, refolding the underwater lens. He was in time to see Winton slap the chief engineer in the face, spit out some profanity that would have started him on an hour of moral lecture, if he had heard either of them emit such words. He saw Winton turn and run, not as if he were running away, but as if he were running to do something, in sudden impatience.

Ten minutes later Henderson had finished explaining what was bothering the preacher. They lay on the bank lazily looking down into the water, putting half attention into locating some other interesting life form, and enjoying the reflection of sunset in the ripples.

"I wish I could chew grass," Henderson said. "It would make it just like watching a river when I was a kid. But the plastic stuff on my face keeps me from putting anything into my mouth."

"The leaves would probably be poisonous anyhow," Charlie brushed a hand through the pretty green of the grass. It was wiry and tough with thin round blades, like marsh grass. "This isn't really grass. This isn't really Earth, you know."

"I know, I wish I could forget it. I wonder what that creep, Winton is doing now." Henderson rolled on his back and looked lazily at the sky. "I've got one up on him now. I got him to act like a creep right out in the open. He won't be giving me that superior, fatherly bilge. He might even call me Henderson now instead of Harry."

"Don't ask too much," Charlie clipped a piece of leaf from a weed and absently tried to put it into his mouth. It was stopped by the transparent plastic film that protected him from local germs and filtered the air he breathed.

He flicked the leaf away, "How did that creep get to be a missionary? Nothing wrong with him, except he can't get on with people. Doesn't help in his line of work to be like that."

"Easy, like I said," said Henderson, staring into the darkening pink and purple of the sky. "They encouraged him to be a missionary so he would go far far away. Don't ever tell him. He thinks that he was chosen for his eloquence." Henderson rolled back onto his stomach and looked at the river. It was a chilly purple now, with silver ripples. "More clouds over the mountains. And those little clouds overhead might thicken up and rain. If the river keeps rising, there might be a flood. We might have to move the ship."

"Winton said that the native mentioned a flood." Charlie got up lazily and stretched. "Getting dark out here anyhow. We'll have to find out more about that interview."

They went in search of the preacher.

What he told them was disturbing, and vague.

"That was Spet," Henderson said. "That was the one I was learning words from all afternoon. And he told you he was going to die?"

Winton was earnest and pale. He sat crouched over the chart table as if his resolution to act had frightened him. "Yes. He said he was going to die. He said that they were going to hang him upside down in a tree as soon as the next rain starts. Because he is old enough."

"But he said that other young males live through it? Maybe he's wrong about dying. Maybe it's not as tough as it sounds."

"He said that many die," Winton said tonelessly. His hands lay motionless on the table. He was moved to a sudden flare of anger. "Oh those stupid savages. Cruel, cruel!" He turned his head to Henderson, looking up at him without the usual patronizing expression. "You'll fix the translator so that it translates me exactly, won't you? I don't want to shoot them to stop them from doing it. I'll just stop them by explaining that God doesn't want them to do this thing. They will have to understand me."

He turned his head to Charlie, standing beside him. "The savages call me Enaxip. What does that mean? Do they think I'm a god?"

"It means Big Box," Henderson cut in roughly. "They still think that the box is talking. I see them watch the box when they answer, they don't watch you. I don't know what they think you are."

That night it did not rain. Winton allowed himself to fall asleep near dawn.

To Spet also it made a difference that it did not rain.

The next day he fished in the river as he always had.

The river was swollen and ran high and swiftly between its banks and fishing was not easy at first, but the brown ghost returned, bringing another one like himself, and they both helped Spet with pulling in the fish traps. The new ghost also wanted to be told how to talk, like a small one, and they all had considerable amusement as the two ghosts acted out ordinary things that often happened, and Spet told them the right words and songs to explain what they were doing.

One of them taught him a word in ghost language, and he knew that he was right to learn it, because he would soon be a ghost.

When Spet carried the fish back along the path to his family hut that evening, he passed the Box That Talks. It spoke to him again, and again asked him questions.

The spirit covered with black that usually gibbered on top of the box was not there. Nothing was on top of the box, but the brown ghost who had just been helping him fish stood beside the box and spoke to it softly each time it asked Spet a question. The box spoke softly back to the ghost after Spet answered, discussing his answers, as if they had a problem concerning him.

Spet answered the questions politely, although some of them were difficult questions, asking reasons for things he had never thought needed a reason, and some were questions it was not polite to ask. He did not know why they discussed him, but it was their business, and they would tell him if they chose.

When he left them, the brown ghost made a gesture of respect and mutual aid in work, and Spet returned, warmed and pleased by the respect of the ghost-relative.

He did not remember to be afraid until he was almost home.

It began to rain.

Charlie came up the ramp and into the spaceship, and found Henderson pacing up and down, his thick shoulders hunched, his fists clenched, and his face wrinkled with worry.

"Hi," Charlie did not expect an answer. He kicked the lever that tightened the noose on the curtain plastic behind him, watched the hot wire cut him loose from the curtain and seal the curtain in the same motion. He stood carefully folding and smoothing his new wrapping of plastic around himself, to make sure that the coating he had worn outside was completely coated by the new wrapping. All outside dust and germs had to be trapped between the two layers of sterile germproof plastic.

He stood mildly smoothing and adjusting the wrappings, watching Henderson pace with only the very dimmest flicker of interest showing deep in his eyes. He could withdraw his attention so that a man working beside him could feel completely unwatched and as if he had the privacy of a cloak of invisibility. Charlie was well mannered and courteous, and this was part of his courtesy.

"How're things," he asked casually, slitting open his plastic cocoon and stepping out.

Henderson stopped pacing and took a cigar from a box on the table with savage impatience in his motions. "Very bad," he said. "Winton was right."

"Eh?" Charlie wadded up the plastic and tossed it into the disposal hopper.

"The natives, they actually do it." Henderson clenched the cigar between his teeth and lit it with savage jerky motions. "I asked Spet. No mistake in the translator this time. He said, yes, they hang the young men upside down in trees after the first spring rain. And yes, it hurt, and yes sometimes one died, and no, he didn't know why they had to do this or what it was for. Ha!" Henderson threw the cigar away and began to pace again, snarling.

"Oh yes, the translator was working fine! Generations of torturing their boys with this thing, and the adults can't remember how it started, or why, and they go on doing it anyway . . ."

Charlie leaned back against the chart table, following his pacing with his eyes. "Maybe," he said mildly, "there's some good reason for the custom."

"A good reason to hang upside down for a week? Name one!"

Charlie did not answer.

"I just came from the native village," he said conversationally as though changing the subject. "Winton has started. He's got the translator box right in the center of their village now, and he's sitting on top of it telling them that God is watching them, and stuff like that. I tried to reason with him, and he just pointed a gun at me. He said he'd stop the hanging ceremony even if he had to kill both of us and half the natives to do it."

"So let him try to stop them, just by talking." Henderson who had stopped to listen, began to pace again, glowering at the floor. "That flapping mouth! Talking won't do it. Talking by itself never does anything. I'm going to do it the easy way. I'm going to kidnap Spet, and keep them from getting him.

"Charlie, tribes only do things at the right season, what they call the right season. We'll turn Spet loose after the week is up, and they won't lay a hand on him. They'll just wait until next year. Meanwhile they'll be seeing that the trees aren't angry at them or any of that malarky. When they see that Spet got away with it, they'll have a chance to see a young male who's becoming a healthy adult without being all stretched out and physically wrecked.

"And maybe next year, Spet will decide to get lost by himself. Maybe after looking at how Spet looks compared with an adult who was hanged, some of the kids due for hanging next year would duck into the forest and get lost when it's due."

"It's a good dream," Charlie said, lounging, following Henderson's pacing with his eyes. "I won't remind you that we swore off dreaming. But I'm with you in this, man. How do we find Spet?"

Henderson sat down, smiling. "We'll see him at the stream tomorrow. We don't need to do anything until it starts raining."

Charlie started rummaging in the tool locker. "Got to get a couple of flashlights. We have to move fast. Have to find Spet in a hurry. It's already raining, been raining almost an hour."

Darkness and rain, and it was very strange being upside down. Not formal and ceremonial, like a story-song about it, but real, like hauling nets and thatching huts, and eating with his brothers. The world seemed to be upside down. The tree trunk was beside him, strong and solid, and the ground was above him like a roof being held up by the tree, and the sky was below his feet and very far away . . . and looking down at the clouds swirling in the depth of the sky he was afraid of falling into it. The sky was a lake, and he would fall through it like a stone falling through water. If one fell into the sky, one would fall and fall for a long time, it looked so very deep.

Rain fell upward out of the sky and hit him under the chin. His ankles and wrists were tightly bound, but did not hurt, for the elders had used a soft rope of many strands tied in a way that would not stop circulation. His arms were at his sides, his wrists bound to the same strand that pulled at his ankles, and the pull on his arms was like standing upright, carrying a small weight of something. He was in a standing position, but upside down. It was oddly comfortable. The elders had many generations of experience to guide them, and they had chosen a tall tree with a high branch that was above the flood. They had seemed wise and certain, and he had felt confidence in them as they had bound and hung him up with great gentleness, speaking quietly to each other.

Then they had left him, towing their little flat-boats across the forest floor that was now a roof above his head, walking tall and storklike across the dim lit glistening ground, which looked so strangely like a rough, wet ceiling supported by the trunks of trees.

The steady rain drummed against the twigs and small spring leaves, splashing in the deepening trickles of water that ran along the ground. Spet knew that somewhere the river was overflowing its banks and spreading into the forest and across meadows to meet and deepen the rain water. In the village the street would be muddy, and the children would be shouting, trying already to pole the boats in the street, wild with impatience for the rising of the river, to see again the cold swift flow of water and watch the huts of the town sag and flow downward, dissolve and vanish beneath the smooth surface.

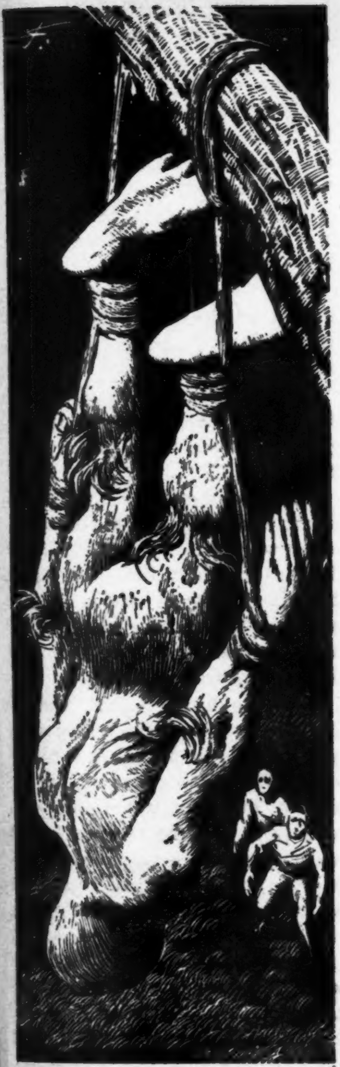
For a month in the time of floods everyone would live in boats. His tribe would paddle and pole up the coast, meeting other tribes, trading baskets and fishhooks, salt fish for salt meat, and swapping the old stories and songs with new variations brought from far places. Last time they had been lucky enough to come upon a large animal caught in the flood, swimming and helpless to resist the hunters. The men of the enemy tribe had traded skin for half the roast meat on a raft, and sang a long story song that no one had heard before. That was the best feast of all.

Then the horde of small boats would come home to the lakes that were the draining meadows and forest, and take down the sick and dying young men who had been hanging in the trees, and tend and feed them and call them "elder." They would then travel again for food, to fight through storms to salt the meat of drowned animals and hunt the deep sea fish caught in the dwindling lakes.

When the rains had stopped and the land began to dry, they would return to the damp and drying land to sing and work and build a village of the smooth fresh clay left by the flood.

But Spet would not see those good times again. He hung in his tree upside down with the rain beating coolly against his skin. It was growing too dark to see more than the dim light of the sky. He shut his eyes, and behind his shut eyes were pictures and memories, and then dreams.

Here he is. How do we get him down. Did you bring a knife. How do we get up to him. It's slippery. I can't climb this thing. Wait, I'll give you a boost.



A flash of light, too steady for lightning, lasting a full second, Spet awoke fully, staring into the darkness, looking for the light which now was gone, listening to the mingled voices in the strange language.

"Don't use the flashlight, it will frighten him."

"Going to try to explain to him what we're doing?"

"No, not right away. He'll come along. Spet's a pal of mine already."

"Man, do these trees have roots. As big as the branches!"

"Like mangroves."

"You're always claiming the South has everything. What are mangroves?"

"Florida swamp trees. They root straight into deep water. Give a hand here."

"Keeps raining like this and they're going to need their roots. How high can we climb just on the roots anyhow?"

"Think you're kidding? Why else would they have roots like this? This territory must be underwater usually, deep water. This flat land must be delta country. We're just in the dry season."

"What do you mean delta country? I'm a city boy, define your terms."

"I mean, we're at the mouth of one of those big wandering rivers like the Mississippi or the Yellow River that doesn't know where it's going to run next, and splits up into a lot of little rivers at the coast, and moves its channel every spring. I noticed that grass around the ship

looked like salt water grass. Should have thought about it."

A dark figure appeared beside Spet and climbed past him toward the branch where the rope was tied. The next voice was distant. *"You trying to tell me we landed the ship in a riverbed? Why didn't you say something when we were landing?"*

"Didn't think of it, then." That voice was loud and close.

"It's a fine time to think of it now. I left the ship wide open. You up there yet?"

"Uh huh. I'm loosening the rope. Going to lower him slow. Catch him and keep him from landing on his head, will you?"

"Ready. Lower away."

The voices stopped and the world began to spin, and the bole of the tree began to move past Spet's face.

Suddenly a pair of wet arms gripped him, and the voice of the brown ghost called, *"Got him."*

Immediately the rope ceased to pull at Spet's ankles, and he fell against the brown ghost headfirst and they both tumbled against slippery high roots and slid down from one thick root to another until they stopped at the muddy ground. The ghost barked a few short words and began to untie the complex knots from Spet's ankles and wrists.

It was strange sitting on the wet ground with its coating of last year's leaves. Even rightside up the forest looked strange, and Spet knew that this was because of death, and he began to sing his deathsong.

The brown ghost helped him to his feet, and said clearly in ordinary words. "Come on, boy, you can sing when we get there."

His friend dropped down from a low branch to the higher roots of the tree, slipped and fell on the ground beside them.

In Spet's language the standing one said to the other. "No time for resting, Charlie, let's go."

It was very dark now, and the drips from the forest branches poured more heavily, beating against the skin.

The ghost on the ground barked a few of the same words the relative-ghost had made when he had fallen, and got up.

The two started off through the forest, beckoning Spet to follow. He wondered if he were a ghost already. Perhaps the ghosts had taken him to be a ghost without waiting for him to die. That was nice of them, and a favor, possibly because they were kinfolk. He followed them.

The rain had lightened, and become the steady, light falling spray that it would be for the next several days. Walking was difficult, for the floor of the forest was slippery with wet leaves, and the mud underneath was growing soft again, remembering the time it had been part of the water of the river, remembering that the river had left it there only a year ago. The ghosts with him made sputtering words in ghost talk, sometimes tripped and floundered and fell, helped each other up and urged him on.

The forest smelled of the good sweet odors damp earth and growing green leaves. The water and mud was cooling against his hurting feet, and Spet unaccountably wanted to linger in the forest, and sit, and perhaps sleep.

The floods were coming, and the ghosts had no boats with them.

"Come on, Spet. We go to big boat. Come on, Spet."

Why did they stumble and flounder through the forest without a boat? And why were they afraid? Could ghosts drown? These ghosts, with their perpetually wet appearance—if they had drowned once, would they be forced to relive the drowning, and be caught in the floods every year? A bad thing that happened once, had to happen again and again in dreams. And your spirit self in the dream lived it each time as something new. There is no memory in the dream country. These ghosts were dream people, even though they chose to be in the awake world. They were probably bound by the laws of the dream world.

They would have to re-enact their drowning. Their boat was far away, and they were running toward the watercourse where the worst wave of the flood would come.

Spet understood suddenly that they wanted him to drown. He could not become a ghost, like these friendly brown ghosts, and live in their world, without first dying.

He remembered his first thoughts of them, that they carried the illusion of water over them because they had once drowned. They wanted him to be like them. They were trying to lure him through waters where he would stumble and drown as they had.

Naturally as they urged him on their gestures were nervous and guilty. It is not easy to urge a friend onward to his death. But to be shaped like a young one, merry, brown, and covered with water, obviously he had to be drowned as they were drowned, young and merry, before the hanging had made a sad adult of him.

He would not let them know that he had guessed their intention. Running with them toward the place where the flood would be worst, he tried to remember what verse he had stopped singing his death song, and began again from that verse, singing to stop the fear-thoughts. The rain beat coolly against his face and chest as he ran.

Each man in his own panic, they burst from the forest into the clearing. The engineers saw with a wave of relief, that the spaceship was still there, a pale shaft upright in the midst of water. Where the meadow had been was a long narrow lake, reflecting the faint light of the sky, freckled with drifting spatters of rain.

"How do we get to it?" Charlie turned to them.

"How high is the water? Is the ramp covered?" Henderson asked practically, squinting through the rain.

"Ramp looks the same. I see grass sticking up in the water. It's not deep."

Charlie took a careful step and then another out into the silvery surface. Spongy grass met his feet under the surface, and the water lapped above his ankles, but no higher.

"It's shallow."

They started out toward the ship. It took courage to put their feet down into a surface that suggested unseen depth. The shallow current of water tugged at their ankles, and grew deeper and stronger.

"Henderson, wait!"

The three stopped and turned at the call. The path to the village was close, curving away from the forest toward the distant river bank, a silvery road of water among dark bushes. A dark figure came stumbling along the path, surrounded by the silvery shine of the rising water. Ripples spread from his ankles as he ran.

He came to the edge where the bushes stopped and the meadow began, saw the lake-appearance of it, and stopped. The others were already thirty feet away.

"Henderson! Charlie!"

"Walk, it's not deep yet. Hurry up." Charlie gestured urgently for him to follow them. They were still thirty feet out, standing in the smooth silver of the rising water. It was almost to their knees.

Winton did not move. He looked across the shining shallow expanse of water, and his voice rose shrilly. "It's a lake, we need boats."

"It's shallow," Charlie called. The rain beat down on the water, speckling it in small vanishing pockmarks. The two engineers hesitated, looking back at Winton sensing something wrong.

Winton's voice was low, but the harshness of desperation made it as clear as if he had screamed.

"Please. I can't swim—"

"Go get him," Henderson told Charlie. "He's got a phobia. I'll herd Spet to the ship, and then head back to help you."

Charlie was already splashing in long strides back to the immobile figure of the preacher. He started to shout when he got within earshot.

"Why didn't you say so, man? We almost left you behind!" He crouched down before the motionless fear-dazed figure. "Get on, man. You're getting taxi service."

"What?" asked Winton in a small distant voice. The water lapped higher.

"Get on my back," Charlie snapped impatiently. "You're getting transportation."

"The houses dissolved, and they went off in boats and left me alone. They said that I was an evil spirit. I think they did the Hangings anyway, even though I told them it was wrong." Winton's voice was vague, but he climbed on Charlie's back. "The *houses* dissolved."

"Speak up, stop mumbling," muttered Charlie.

The spaceship stood upright ahead in the center of the shallow silver lake that had been a meadow. Its doors were open, and the bottom of the ramp was covered by water. Water tugged against Charlie's lower legs as he ran, and the rain beat against their faces and shoulders in a cool drumming.

It would have been pleasant, except that the fear of drowning was growing even in Charlie, and the silver of the shallow new lake seemed to threaten an unseen depth ahead.

"There seems to be a current," Winton said with an attempt at casual remarks. "Funny, this water looks natural here, as if the place were a river, and those trees look like the banks."

Charlie said nothing. Winton was right, but it would not be wise to tell a man with phobia about drowning that they were trying to walk across the bed of a river while the water returned to its channel.

"Why are you running?" asked the man he carried.

"To catch up with Henderson."

Once they were inside the spaceship with the door shut they could ignore the water level outside. Once inside, they would not have to tell Winton anything about how it was outside. A spaceship made a good submarine.

The water level was almost to Charlie's knees and he ran now in a difficult lurching fashion. Winton pulled up his feet nervously to keep them from touching the water. The plastic which they wore was semipermeable to water and both of them were soaked.

"Who is that up ahead with Henderson?"

"Spet, the native boy."

"How did you persuade him to stay away from the ceremony?"

"We found him hanging and cut him down."

"Oh," Winton was silent a moment trying to absorb the fact that the engineers had succeeded in rescuing someone. "It's a different approach. I talked, but they wouldn't listen." He spoke apologetically, hanging on to Charlie's shoulders, his voice jolting and stopping as Charlie tripped over a concealed tuft of grass or small bush under the water. "They didn't even answer—or look at me. When the water got deep they went off in little boats and didn't leave a boat for me." Charlie tripped again and staggered to one knee. They both briefly floundered waist deep in the water, and then Charlie was up again, still with a grip on his passenger's legs, so that Winton was firmly on his back.

When he spoke again Winton's tone was casual, but his voice was hysterically high in pitch. "I asked them for a boat, but they wouldn't look at me."

Charlie did not answer. He respected Winton's attempt to conceal his terror. The touch of water can be a horrifying thing to a man with a phobia of drowning. He could think of nothing to distract Winton's attention from his danger, but he hoped desperately that the man would not notice that the water had deepened. It is not possible to run in water over knee height. There was no way to hurry, now. The rain had closed in in veiling curtains, but he thought he saw the small figures of Henderson and the native in the distance reach the ramp which led to the spaceship.

If the flood hit them all now, Henderson and Spet could get inside, but how would he himself get this man with a phobia against water off his back and into the water to swim? He could visualize the bony arms tightening around his throat in an hysterical stranglehold. If a drowning man gets a clutch on you, you are supposed to knock him out and tow him. But how could he get this non-swimming type off his back and out where he could be hit?

If Winton could not brace himself to walk in water up to his ankles, he was not going to let go and try to swim in water up to his neck. He'd flip, for sure! Charlie found no logical escape from the picture. The pressure of the strong bony arms around his throat and shoulders and the quick irregular breathing of the man he was carrying made him feel trapped.

The water rose another inch or so, and the drag of it against his legs became heavier. The current was pulling sidewise.

"You're going slowly." Winton's voice had the harsh rasp of fear.

"No hurry," with difficulty, Charlie found breath to speak in a normal tone. "Almost there."

The curtain of rain lifted for a moment and he saw the spaceship, dark against the sky, and the ramp leading to its open door. The ramp was very shrunken, half covered by the rising water. It seemed a long way ahead.

As he watched, a light came on.

In the archway of the spaceship, Henderson flipped a switch and the lights went on.

Spet was startled. Sunlight suddenly came from the interior of the hut and shone against the falling rain in a great beam. Rain glittered through the beam in falling drops like sparks of white fire. It was very unlike anything real, but in dreams sunlight could be in one place and rain another at the same time, and no one in the dream country was surprised. And these were people who usually lived in the dream country, so apparently they had the power to do it in the real world also.

Nevertheless, Spet was afraid, for the sunlight did not look right as it was, coming out in a great widening beam across the rippling rain-pocked water. Sunlight did not mix well with rain.

"Sunlight," Spet said apologetically to his relative-ghost.

The brown ghost nodded and led him down the slope of the ramp through the strange sparkling sunlight, with the ramp strange and hard underfoot.

"Don't go inside until I return," the ghost said, mouthing the words with difficulty. The ghost placed his hands around the railing of the ramp. "You hang on here and wait for me," said the brown ghost of someone in his family, and waded down into the water.

Spet followed him down into the comfortable water until his sore feet were off the end of the ramp and in the cooling soft mud, and then he gripped the rail obediently and waited. The water lapped at his waist like an embrace, and the wind sang a death-song for him.

The bright glare of the strange sunlight on dancing water was beautiful, but it began to hurt his eyes. He closed them, and then heard a sound other than the wind. Two sounds.

One sound he recognized as the first flood crest crashing through the trees to the north, approaching them, and he knew he must hurry and drown before it arrived, because it was rough and hurtful.

The other sound was the strange voice of the black spirit which usually gibbered on top of the Box That Talks. Spet opened his eyes, and saw that the gibbering spirit was riding on the shoulders of the brown ghost, as he and his friend, the other brown ghost, moved through the waist-deep water towards Spet and the ramp.

The black spirit gibbered at him as they passed, and Spet felt a dim anger, wondering if it would bring bad luck to him with its chants, for its intentions could not be the same as the friendly ghosts.

"Spet, come up the ramp with us. It's dry inside. Don't look like that, there's nothing to be afraid of now, we'll go inside and shut the door, it will keep the water away, it won't get in . . . Come along Spet."

The black spirit suddenly leaped down on the ramp with a strange scream. *"Aaaaiiii . . . He's turning into a seaweed. Quick, get him out of the water! Help!"*

The spirit with the black skin and white face possibly wanted him for his own dark spirit world. He was coming down the ramp at Spet, screaming. He was too late though. Spet knew that he was safe for the dim land of the drowned with the friendly ghosts who had come for him. He felt his feet sending roots down into the mud, moving and rooting downward, and a wild joy came over him, and he knew that this was the right thing for him, much more right and natural than it would have been to become a tall sad adult.

He had been feeling a need for air, panting and drawing the cold air into his lungs. Just as the clawed hands of the dark spirit caught hold of his neck, Spet had enough air, and he leaned over into the dark and friendly water, away from the painful beauty of the bright lights and moving forms. The water closed around him, and the sound of voices was lost.

He could still feel the grip of the spirit's bony arms around his neck, pulling upward, but he had seen the brown ghosts running towards them, and they would stop it from doing him any harm . . . so he dismissed the fear from his mind, and bent deeper into the dark, and plunged his hands with spread fingers deep into the mud, and gripped his ankles, as if he had always known just how to do this thing. His hands locked and became unable to unfold. They would never unfold again.

He felt the soft surge that was the first flood wave arriving and passing above him, and ignored it, and, with a mixture of terror and the certainty of doing right, he opened his mouth and took a deep breath of cold water.

All thought stopped. As the water rushed into his lungs, the rooted sea creature that was the forgotten adult stage of Spet's species began its thoughtless pseudo-plant existence, forgetting everything that had ever happened to it. Its shape changed.

The first wave of the flood did not quite reach up to the edge of the ship's entrance. It caught the two engineers as they dragged a screaming third human up the ramp toward the entrance, but it did not quite reach into the ship, and when it passed the three humans were still there. One of them struck the screaming one, and they carried him in.

Winton was hysterical for some time, but Henderson seemed quite normal. He worked well and rationally in compiling a good short survey report to carry to the planetary survey agency, and when the waters dried around the spaceship he directed the clearing of mud from the jets and the overhaul of the firing chambers without a sign of warp in his logic.

He did not want to speak to any native, and went into the ship when they appeared.

Winton was still slightly delirious when they took off from the planet, but, once in space, he calmed down and made a good recovery. He just did not talk about it. Henderson still seemed quite normal, and Charlie carefully did not tell Winton that Henderson kept a large bush in a glass enclosure in the engine room.

Ever since that time Henderson has been considered a little peculiar. He is a good enough risk for the big liners, for they have other engineers on board to take over if he ever cracks.

He has no trouble getting jobs, but wherever he goes, he brings with him an oversized potted plant and puts it in the engine room and babies it with water and fertilizer. His fellow officers never kid him about it, for it is not a safe subject.

When Henderson is alone, or thinks he is alone, he talks to the potted bush. His tone is coaxing. But the bush never answers.

Charlie runs into him occasionally when their ships happen to dock at the same spaceport around the same planet. They share a drink and enjoy a few jokes together, but Charlie takes care not to get signed onto the same ship as Henderson. The sight of Henderson and his potted bush together make him nervous.

It's the wrong bush, but he'll never tell Henderson that.

THE END

OUR LONELY PLANET

BY ISAAC ASIMOV

***Well out** from the center of our galaxy—a young planet of a young star . . . why haven't we been visited by the older races of the far older, Center stars. . . ?*

ONE of the questions that is asked innumerable times in science-fiction circles — I have even asked myself—is: "If there is life elsewhere in the Universe, why hasn't *it* reached *us?"*

Since modern views of the Universe would have it that solar systems are the rule rather than the very rare exception we thought they were twenty years ago, there should be millions, perhaps billions, of planets with physical and chemical characteristics reasonably close to those of Earth in our own galaxy alone. Since modern views in biochemistry would seem to make the origin of life the inevitable consequence of Earthlike physics and chemistry rather than a rare and miraculous occurrence, there should also be million, perhaps billions, of independent life systems in our galaxy alone.

Since most other planets are probably as old as our own, there has been ample time for evolution elsewhere as well as here. Suppose that one system of planetary life out of a thousand develops organisms with sufficient intelligence to understand and control the forces of Nature. Then there are still thousands, perhaps millions, of intelligent life forms in our own galaxy alone.

Now, to repeat: "If there is life elsewhere in the Universe, why hasn't *it* reached *us?"*

Well, through a circuitous line of reasoning, I think I have a possible answer that sounds well to me. The line of reasoning starts in the Bible, and if I may have the floor, gentlemen . . .

In Genesis 15:5, it is related that the Lord encouraged the patriarch, Abram, who feared that, since he was childless, earlier promises that he would be made "a great nation" would not, after all, be kept. The verse reads: "And He [the Lord] brought him forth abroad and said, Look now toward heaven, and tell the stars, if thou be able to number them: and He said unto him, So shall thy seed be."

This is an example of the typical way in which the ancients expressed large numbers: "as the stars in the heaven" or "as the sandgrains of the shore" or "as the water drops of the ocean."

Now there *are* many drops of water in the ocean and many grains of sand in the seashore. As far as ancient man was concerned, such numbers *were* infinite. Except for occasional geniuses like Archimedes, no man before modern times could even consider that numbers might exist great enough to express sand grains and water drops. (It was 1300 A.D. before the word "million" was invented. Until then, the largest number word was "myriad," which was Greek for ten thousand. Even Archimedes, in calculating the number of poppy seeds in the entire Universe as he knew it, used expressions meaning "myriads of myriads of myriads . . .")

But what about the number of stars in the sky? Are they as innumerable as the sand grains and water drops?

To be sure, if the Lord had chosen to reveal to Abram *all* the stars in the Universe in one flash of miraculous sight, Abram would have seen a minimum of 10,000,000,000,000,000,000,000 — ten billion trillion — stars, and that would certainly have been innumerable to him.

However, no Biblical commentator I've ever heard of has suggested that this was what happened. The suggestion of vast numbers in Genesis 15:5 is always taken as applying to only those stars actually visible in the sky to the naked eye.

Even with that limitation, most people, I'm sure, would consider the metaphor quite an effective one and not in the least ridiculous.

I can see why they should think that, too. I, myself, am a city boy and I've hardly ever really seen the stars. The buildings block them out; the street lights dim them out; smoke and dirt blot them out. And only once did I get a real chance to find out what I was missing.

I spent the night at a friend's country house in New Hampshire, and when night came, I couldn't sleep. It got dark, it seems. Battling my primitive fears of a darkness I had never really experienced —this was years *after* I wrote "Nightfall" by the way—I thought I would step out into the open and prove to myself that there was nothing to be afraid of. It was a warm summer night, so I just walked outside in my pajamas and slippers.

There was no Moon, no clouds, no artificial light for miles around, so, for the first time in my life, *I saw the stars!* Millions of them, billions of them, trillions of them.

It was a wonderful sight. I stayed out, staring, for a long time, and to the day I die I shall always remember that once I saw the stars.

But the question is, how many stars did I really see?

The faintest star that can be seen with the naked eye is of magnitude 6.5 and the number of stars that exist in the entire circuit of the skies that bright or brighter is just about six thousand.

That's all. That's the hard fact of it. Six thousand.

And since at any moment only half the sky is above the horizon, the number of stars theoretically visible at any one moment is three thousand. But then the atmosphere absorbs some of the light that passes through it. Even the purest, clearest atmosphere absorbs thirty per cent of the starlight that strikes it. As you turn your gaze toward the horizon, you are looking through a much greater thickness of air than you do when you stare up at zenith. The result is that the faintest stars which can be just made out near the zenith are lost to vision if they are located lower in the sky.

Actually, then, the total number of stars I could possibly have seen outside my friend's summer house—even counting those obscured by trees and unevennesses of the horizon—was twenty-five hundred.

The stars in the sky innumerable? Hah. Even the Babylonian shepherds could have counted twenty-five hundred, I'm sure.

One dramatic way of pointing out the difference between the facts as they are and the facts as we think they are is to pose the following riddle: If, at any particular time, the Moon were removed from the sky, how many stars—visible ones, of course — would it have been covering?

If one thinks of the size of the Moon and the thickness with which stars are strewn across the vault of the night sky and then follows intuition, the answer given might be five or seven or ten or fifty.

Anyway, quite a few. What's *your* guess?

But let's not go by intuition. The circuit of the skies is measured by degrees—three hundred sixty degrees for the full circumference. The area of the total sky—or of any sphere, for that matter—works out to about forty-one thousand two hundred square degrees. Since there are six thousand visible stars all told, we can say that there is one star for every 6.9 square degrees of sky.

But the apparent diameter of the Moon's sphere is—on the average—0.52 degrees. Its area is, therefore, 0.27 square degrees and the odds are thus about twenty-five to one that the removal of the Moon would reveal *not one star behind it.*

This stars - in - the - sky situation changes at once if we view the skies from the Moon, or from a space station, or from any point outside a planetary atmosphere. Science-fiction writers usually talk about the "familiar constellations" seen from other worlds in our Solar System. I've done it myself. Yet the notion is almost certainly wrong.

The reasoning behind the "familiar constellations" business is that any change of position within the Solar System involves so small a movement in comparison with the distances of the stars that there would be no noticeable alteration in their relative positions.

And that's right, as far as it goes.

However, remember the thirty per cent of starlight that is absorbed by our atmosphere. On the Moon, to use that as an example, no starlight is absorbed and every individual star seems 1 3/7 times as bright as it does to us on Earth. Another way of putting it is that every star is 0.4 lower—i.e. brighter—in magnitude on the Moon than on the Earth.

This is a noticeable increase in brightness but not an overwhelming one. The eye would grow accustomed to it quickly and, if that were all, the Moon's starry sky would seem gaudy —with its brighter and non-twinkling stars—but not strange.

But it's not all. Allow for this uniform increase of 0.4 magnitude and the limit of naked-eye visibility stretches down to stars of magnitude 6.9. That is, a star which is of magnitude 6.9 on Earth—and therefore invisible to the naked eye—is of magnitude 6.5 as seen from the Moon and just visible.

So what?

So this— The number of stars increases very rapidly with magnitude. Any glance at the sky will convince you that there are many more dim stars than bright stars. To be bright, a star has to be big or close. Well, there are more small stars than big ones and since volume increases as the cube of the radius, there is more room far away than close by. In general, the number of stars at each level of magnitude is three times the number at the previous level. Thus, there are about three hundred fifty stars between magnitudes three and four, about eleven hundred between magnitudes four and five, and about thirty-two hundred between magnitudes five and six.

In the interval between 6.5 and 6.9 there are six thousand stars. All of these are not visible on Earth and are visible on the Moon, just because the Moon lacks an atmosphere. The night sky as seen from the Moon, therefore contains twelve thousand stars, *twice the number that can be seen from Earth*. Furthermore, the number that can be seen above the horizon at any one time is not lessened by the effect of additional atmospheric absorption. The actual number seen at any one time from level ground on the Moon is therefore two and one half times the number seen under similar conditions on Earth.

From the Moon—or in space, generally—you could still make out patterns of bright stars such as those of the Big Dipper or of Orion, but the finer details would all be drowned out in thousands of additional stars, and the overall effect would be that of a completely strange sky.

In other words, when we leave Earth we say farewell to our dear "familiar constellations."

This raises another point. Are there places in the Universe where the starry sky is even more impressive than it appears from the Moon?

Obviously, it would be more impressive to inhabitants who lived on a planet revolving about a Sun that was part of the densely populated central nucleus of a galaxy or within a globular cluster. Our own Sun, after all, is way out in the sparsely-populated spiral arm of our galaxy.

In our home neighborhood there are one hundred eighty-eight stars or star systems—that is, binaries or multiple stars—known to be located within ten parsecs of Earth. (A parsec is equal to 3.26 light-years.) This means that, on the average, there are four and one half stars—or star systems—per one hundred cubic parsecs of space and that the average distance between stars—or star systems—in our neck of the woods is about 2.8 parsecs, which is equivalent to 9.2 light-years.

At the galactic center or in a globular cluster—a positive photograph of which, under high magnification, looks for all the world like a heap of talcum powder—the average distance between stars is one light-year. A hundred cubic parsec volumes in which stars were this closely packed would contain not four and one half stars but thirty-five hundred stars.

In other words, all things being otherwise equal, the number of stars visible in the skies near the galactic center would be seven hundred eighty times as many as those visible out here. Even allowing for horizon effects, the number of stars visible above the horizon would be about two million.

There would be, on the average, one hundred visible stars per square degree of the sky and a globe the area of the Moon would, at any particular time, be covering twenty stars on the average.

There would naturally be more stars at every level of brightness. The skies in the galactic center would contain more first-magnitude stars —about seventy-five hundred—than our heavens contain of stars of any description.

Furthermore, the chances are very much in favor of there being a number of stars brighter than any of those in our own skies. We can duplicate galactic center conditions by imagining all the visible stars we see pulled in to 1/9.2 of their actual distance. Any star whose nearness is increased 9.2 times has its brightness increased 9.2 x 9.2 or eighty-five times. A brightness increase of eighty-five is equivalent to a decrease in magnitude of 4.8.

Sirius, in other words, instead of the magnitude of —1.6 which it now has, would burn with a brightness equal to a magnitude of —6.4. It would be eight times as bright as Venus at its brightest. Ten other stars in our sky would become brighter than Venus under these conditions and about two hundred fifty stars altogether would be brighter than Sirius —our brightest star—appears to us now.

The starlight in such a sky would by no means be negligible. It would be roughly equal to the light of the full Moon as seen from Earth, so that a cloudless night, under such conditions, would never be dark.

Despite all this gorgeous display, the stars would still all look like stars. The chances of having any stars close enough to look like tiny suns with visible globes is just about nil.

Assuming our Sun to be an average star and placing it at a light-year's distance—the average interstellar distance at the Galactic center—its apparent diameter would be about 0.03 seconds of arc. (There are sixty seconds to one minute and sixty minutes to one degree). In order for a heavenly body to be seen as a globe it must have an apparent diameter of at least three minutes. Perhaps the 200-inch Palomar telescope might show the Sun to be a tiny globe even at a distance of a light-year but certainly no other existing telescope could, and *certainly* no unaided eye could.

Of course, one light-year is only the average distance between stars. Some stars would be closer to one another. Well, in order for a star the size of the Sun to be seen as a globe it would have to be distant not more than a billion miles, which is less than the distance between us and the planet, Uranus. It is quite impossible for a star to be that close to another unless it is part of a binary, and I'm not considering that situation here.

But then again, suppose the star to be larger than the Sun. All right—In order for a star to be seen as a globe at a distance of a light-year, it would have to have a diameter of about eight thousand times that of the Sun. If such a star were in the position of our Sun, it would fill up the Solar System beyond the orbit of Neptune. Stars that size are freaks indeed and the chances of finding one within a light-year of your planet are virtually zero.

Now what does all this have to do with the neglect of our own world by the possible intelligences elsewhere in our galaxy? Consider several points:

1. About ninety per cent of the stars and hence, assuming random distribution, about ninety per cent of the intelligences which have evolved, exist in the crowded galactic center.

2. A closer spacing of stars makes interstellar travel somewhat less of a problem while the concomitantly greater "starriness" of the sky is liable to make interstellar travel more of a popular goal and dream.

3. The intermingling of cultures is a catalyst for advancement.

Now, then, if all intelligences have an equal chance of being the first to attain interstellar travel, then on the basis of point 1, it is nine times as likely that the victory be attained first somewhere in the galactic center.

If the chances are not equal but are inversely proportional to the average distance separating the stars, then, combining points 1 and 2, it is eighty times as likely that the victory be attained first in the galactic center.

Once one group achieves interstellar travel, other intelligences that are reached by it will either be wiped out or colonialized, or will also learn the trick and proceed to spread it to those intelligences *they* can reach. Therefore what I mean by point 3 is that, although it might take six billion years for one world to develop a life form that can, in turn, develop interstellar travel, it will then perhaps take as little as a thousand years for all the intelligences within reach to develop it also.

In short then, if even one group of intelligences has worked up a practical form of interstellar travel during the last few millennia, I find no trouble in imagining that trade has already developed on a galactic scale or that even some kind of galactic federation already exists. (Perhaps there are some small independent federations, each not knowing of the other's existence, among the various globular clusters.)

But then why hasn't a federation contacted us?

Easy. I used the phrase "intelligences within reach" a few lines back and that's the key point.

Consider the economics of the thing. With ninety per cent of the worlds, of the resources, of the intelligences in the galactic center, why bother venturing out into the spiral arms, where distances that must be covered between stars are nine times as great and the pickings in terms of worlds, of resources, of intelligences is only one-tenth as great.

When a sample of iron ore is too low in iron, it becomes unprofitable to work it. And when a sample of space becomes too thin in worlds, is it too unprofitable to enter it?

If so, here we are on our lonely planet, a bunch of hicks way out in the sticks, lost in the backwoods where no reasonable beings would waste the energy to go. And, if so, that's the way we're likely to stay, too, unless we find methods of spanning interstellar distances ourselves, go down to the Big Town we call the galactic center and force ourselves on the city slickers.

I'm just enough of a science-fiction writer to think we'll do just that some day—if all this is so.

But is all this so? More particularly, is it true that mere distance need be such a barrier? It's a natural tendency to consider the light-speed limit absolute and to think of interstellar travel as involving years, centuries, millennia, and not to think of intergalactic travel at all. Yet for a science-fiction writer to do so is out of character.

Down to 1800 we knew of no way in which a man could move more quickly than a horse's straining muscles could carry him, or than a gale could force a ship through water. It didn't prevent the imaginative fiction writers of those days from thinking up devices such as flying horses, flying carpets, seven-league boots and obliging demons. None of that ever came to pass; it was all gibberish. But locomotives, autos, planes and jets came to pass and, really, those did the trick either more efficiently, more reliably or both.

The imaginative fiction writers of these days try to get around the light-speed limit by thinking up devices such as hyperspace, inertialess drive and so on. That is just gibberish, too, and perhaps as unlikely as flying carpets. Nevertheless, the real equivalent may some day exist and distance may become quite unimportant as a barrier. (On the surface of Earth, today, show people commute between the east and west coasts, and it matters little to us that a prime source of uranium is in the Congo. Think how either situation would have struck us as little as fifty years ago.)

Now, then, suppose distance *doesn't* matter to a Galactic Empire, and that our little speck of life way out here is just about as accessible as any world in the center. Is there any remaining reason why alien life hasn't reached us?

Yes, chance!

Just by the breaks of the game, they haven't happened to reach us yet.

Let's look into that, now. A question of age arises. Since man has begun wondering about fossils and the length of time it took to put down a particular thickness of sedimentary rock, he has been lengthening the age of the Universe constantly.

As late as ten years ago, the accepted age of the Universe was a mere two billion years. Then it turned out that some calculations on Cepheid variables were wrong; the galaxies were twice as far apart as had been thought and the Universe was four billion years old. The latest figures I have heard is that the Sun is five billion years old and the Universe six billion years old.

The end is not yet. We still don't know enough.

But some things we do know. For instance, some stars are considerably younger than others; stars were *not* all formed at the same time.

For one thing, the giant hot stars —spectral classes O and B—are expending energy at so fearsome a rate that they can't possibly have a lifetime of more than some millions of years—a lifetime, that is, of active starhood prior to the white dwarf stage.

There are also places where cosmic dust spreads thickly and within which it is thought stars are actually forming now.

In fact, the cosmic dust holds the key. The spiral arms of galaxies—most definitely including our own—are loaded with dust out of which stars are forming or within which they are growing. The more dust, the more instability. Our own immediate neighborhood is relatively dust-free and the Sun is a sober, respectable star of settled habits and considerable age.

The stars in the spiral arms of galaxies are included in "Population I."

In the galactic center—of this and other galaxies — and in globular clusters, space is clear, however. There is no dust to speak of. The result is that the stars located there are "Population II" stars. They are quiet stars, of approximately equal age and condition, not growing or undergoing spectacular change. In general, Population II stars seem to be older than Population I stars—how much older has not gone beyond the realm of speculation yet, but a seniority of several billion years—on the average—for Population II over Population I is a possibility.

One could imagine that in the initial ages of galaxy formation, stars formed rapidly and by the tens of billions in the various galactic centers—around a main nucleus that formed the Center proper, and around subsidiary small nuclei that formed a halo of globular clusters. The thick swarming of stars quickly consumed the raw material—that is, the Galactic dust—out of which they were formed. Eventually, no more dust; only stars. Furthermore, if the distribution of dust were reasonably uniform, you would expect a reasonably uniform distribution of stars of reasonably uniform stellar characteristics.

But during the process of formation, the galaxies were rotating. A certain amount of dust was thrown out by centrifugal forces and formed the spiral arms. The dust in the arms was, on the whole, less dense than in the Center, so that stars formed more slowly and, in fact, star formation is still proceeding. Furthermore, the dust distribution would be less uniform so that some stars would have more than an average share of dust and some less. In general, then, the stars in the arms would be of widely distributed age and stellar characteristics, but all would be, to a varying degree, younger than the stars of the center.

So now there is the possibility of supposing that the Galactic Empire had been formed—in the autocatalytic manner described earlier—billions of years ago in the old, old, old stellar systems of the Center. If so, it is reasonable to assume that such an old established Empire has had the curiosity, ability and—most important —the *time* to become aware of every life-bearing planet in the galaxy, including ours. (Just as our own more advanced nations are certainly aware of every life-bearing speck in the South Pacific whether they are particularly interested in it or not.)

Such a consideration would remove the chance that we have not been stumbled upon by the breaks of the game, by the workings of pure chance. The alien life forms *have* stumbled upon us.

So we reach the final question. If they *have* stumbled on us, why don't we know about it?

Maybe we can find an analogy on Earth that will help give us an answer to that.

When primitive man faced the animal kingdom, he killed every beast and bird he could; either for food or out of self-defense. When he grew in sophistication and in control of his environment, he tamed certain animals, but used them for work or as a more dependable food supply. Another increase in sophistication and he kept some as pets or companions, but only the small and pleasant ones.

Nowadays in our pride of mastery and in our complete self-confidence as lord of the planet, we can afford to be completely generous. We establish zoos for even the dangerous animals and treat them kindly and well. We set up hunting seasons, protect the animal young, refuse to allow unlimited killing. We establish animal preserves where we allow no hunting at all. When we find that some animal is in danger of extinction, we get all upset and do our level best to save them. (Of course, our hand is still against organisms that endanger us. I don't suppose anyone would raise a finger to prevent the extinction of the tubercle bacillus.)

This is also true on the human level. When Europeans first entered the North American continent, they wiped out such Indians as they could reach. Now the descendants of the Europeans keep the descendants of such Indian tribes as survived on reservations and feel a paternalistic responsibility for them. And, by and large, it has gone out of fashion to try to wipe out "primitive" people.

So, by analogy, one can envision the youth of the Galactic Empire, in which competing intelligences might have battled viciously and ruthlessly until they learned to co-operate and tolerate, or until one particular intelligence gained undisputed sovereignty. During that period, too, any planet containing a sub-intelligent life form would, if useful to one of the intelligent life forms, be taken over with as little concern over the native life forms as the Europeans displayed over the duckbill platypuses—or even toward the Aborigines—when they took over Australia.

But then once the Galactic Empire had been established and had existed for a few billion years, a change of view, born of security and maturity, might have taken place, analogous to the change of view among mankind which I've just described.

The Galactic Empire might feel a general humanitarian protectiveness concerning the baby intelligences cropping up in the spiral arms. They might even feel curious about them. After all the stars in the arms exist through a much wider range of variation in characteristics than do the stars in the center. Perhaps as a result, the life forms developing on their planets also exhibit a wider range of variations. The baby intelligences might show spectacular differences that would arouse intellectual interest on the part of the xenobiologists of the center.

In either case—set up the No Trespassing signs; No Hunting Under Any Conditions; run the barbed wire around the preserves; set up guards to shoot down poachers on sight; observe and make notes from afar, but don't on any account let the timid little things see you and be disturbed; and my, my, look at them explode atomic bombs just as cute and cunning as they can be—you would almost swear they were people.

So maybe we're not hicks; maybe we're protected specimens and don't know it. In which case, it's still up to us to grow up and show the big boys we're something—or, at least, that we're going to be something some day.

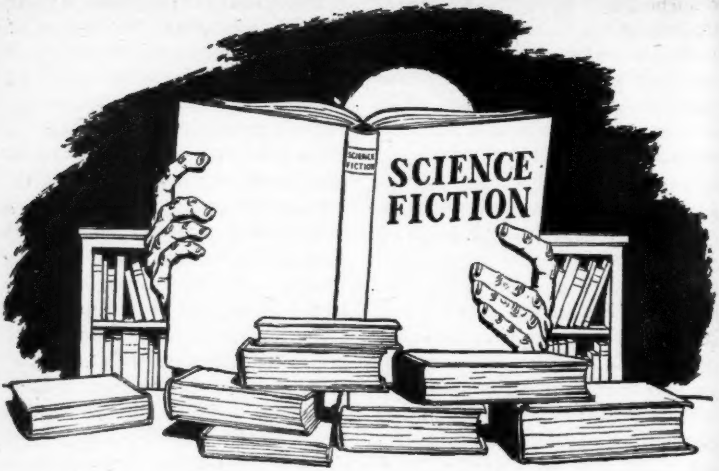
And I'm just enough of a science-fiction writer to think we can do that, too—some day.

THE END

POSSIBLE REASON WHY SOME TEACHERS START SEEING RED

In Russia, a college professor may be rewarded with up to $50,000 a year, and the highest of social respect.

A local schoolteacher is respected as a wise, professional guide.



THE REFERENCE LIBRARY

BY P. SCHUYLER MILLER

THE BRIGHT YOUNG MEN

WHEN the first satellites began orbiting around the Earth, there were many predictions that science fiction would at last come into its own. It hasn't happened, and I think the reasons are different for different people.

For the general public, the whole rockets-satellites-space travel realm of science fiction became old stuff. (Are new satellites news in today's papers? A hit on the Moon or a man in space will be required to get headlines on page 1.) They went over wholeheartedly to bug-eyed-monsters from flying saucers, and in that realm Hollywood has done very well.

For the watchdogs of literature, the whole thing was irrelevant. They have never been interested in the content of science fiction. The ideas it plays with are incomprehensible to most of them—and just as much as the most uneducated among us, the eggheads dislike things that they can't or don't understand. Nor are they interested in the story-values built up around these ideas. The fiction represented by our "best" literary magazines has practically abandoned plot.

What does interest the literati is style—the game of words. It was for that reason that Ray Bradbury was suddenly and temporarily acclaimed, and as quickly dropped. The Bradbury circle in SF-fantasy, however, is by no means dead. Richard Matheson, Robert Sheckley and Charles Beaumont are all writing, even though the "master" is not—at least, not writing fantasy. But they are doing what all good writers do, and striking off in their own individual directions.

Back of this whole school is John Collier, and back of him is perhaps "Saki." These men were and are and will be the masters of the inverted point of view, the distorting mirror, applied not just to a twisted ending but to the entire structure of a story. Basically, Bradbury and the rest are disciples of Collier, but of the four only Bradbury, in his early days, showed much of the originality in point of view that the English writer brought us.

This phase of Bradbury's writing did not at all arouse the interest of most critics. For where content is concerned, the criterion of the truly "literary" short story is its *un*originality. In the name of realism, its characters—whether they are Egyptians of the Thirtieth Century B.C., or New Guinea natives who have never seen a white man, or men and women of the Thirtieth Century A.D.—must be exactly like all of us, acting and reacting just as any one of us would do. We are not to identify ourselves with the people of fiction, this philosophy teaches; the writer must identify them with us.

Bradbury's earlier fantasies, such as the memorable "Homecoming," drew very little acclaim except from a few mavericks who do not subscribe to the philosophy of literature I have just described. Yet these were by far his most original stories. It was not until he switched over to rather trite themes and negligible plots, which the highbrows *could* understand without much mental disturbance, and combined these with a strong, strikingly distinctive style, that the shouting began.

I am not going to deny that some very fine stories have come out of this period of "The Martian Chronicles" and "The Illustrated Man." Nor am I going to argue Bradbury's alleged antiscientific attitude; I don't particularly believe in it, but it would certainly add to his acceptability to the literati. But I do say, and have said, that in his latest book, "Dandelion Wine," Bradbury has let this style take over so completely that it destroys what he seems to be trying to do. The poetic evocation of a small Midwestern town in the 1920s is all but lost when everyone, from old men to small boys, talks like the author.

I don't think it can be denied that Sheckley, Matheson and Beaumont started out as conscious or unconscious disciples of Bradbury, any more than it could be denied that a whole school of SF writers, fifteen or twenty years before, were imitators of A. Merritt. But they, and especially Sheckley and Beaumont, have also been influenced by another important element: the fast rise of the *Playboy* school of magazines, which opened a very well-paying market for well-written sex-with-fantasy stories of the twisted viewpoint or snapper ending variety.

The last collection of Sheckley's stories, unless I'm mistaken, was "Citizen in Space," which Ballantine published in 1956. Most of these stories were from *Galaxy,* and they were consequently more than just literary exercises; the plots were good, sparking SF plots, and the ideas came out of our field and belonged to it. "A pinch of Bradbury," I said then, "but with more meat in the stew (of fantasy, whimsy, whamsy and what-the-hell)."

Charles Beaumont has become the principal practitioner of *Playboy*-type fantasy, and he is now represented by a new paperback collection, "Yonder" (*Bantam Books No. A-1759; 184 pp; 35¢*). Only two of the sixteen stories, however, are of the sex-fantasy sort, and the first of these, "You Can't Have Them All" — about a man who tries to—isn't fantasy at all. The other, "The Monster Show," is a sharp satire on television, the beat generation, and other foibles of our time, as projected a little way ahead.

Beaumont, like Sheckley, has kept story values in his yarns, as Bradbury increasingly did not. This lot read much less like Bradbury imitations than the non-fantasies in Beaumont's previous collection, "The Hunger" (*Putnam, 1957, $3.50*). They are almost all satiric views of our society, seen from the future or with nonhuman eyes. "Quadriopticon" tears apart the Hollywood type of space opera, and "Anthem" is a gagged-up mock film-script that tears to shreds the pretentious film-with-a-message. "The Last Caper" satirizes the sex-and-sadism private-eye story, and would be more memorable if Fritz Leiber hadn't done it for all time with "The Day He Cried." In "World of Differents" a baby-size saucer-man isn't helped by the fact that he has learned English from a copy of James Joyce's masterpiece of unintelligibility, "Finnegan's Wake."

The same wry, bitter, skillful satire threads through the stories with more obviously SF and fantasy themes. "Fritzchen" is a more or less standard monster yarn distinguished by the fact that the victims are as loathsome as the monster. "The Jungle"—also in the Dikty anthology—confronts future technology with a brand of African magic that never was except in Bradbury and Beaumont. "Hair of the Dog" proves again that you can't trust the Devil, and "Mother's Day" is an entirely unconvincing venture in interplanetary sex. "Place of Meeting" asks what happens to the amalgamated vampires of the world when there is no blood to suck, and "Traumerei" is another old, old theme about the reality of dreams. "The New Sound" is a vignette of obsession.

We have left two almost "straight" robot or android stories. The better of these is "Last Rites," in which a priest is summoned to the deathbed of an old friend who is an android. The question: can a man-made thing have a soul? It's asked again, in different terms, in "In His Image," in which a robot falls in love.

If Bradbury has gone over to style-for-its-own-sake, and Sheckley seems to have stuck to story-telling, Beaumont is aiming his talents at sharp satire. The Bradbury flavor is beginning to fade, and a Beaumont individuality emerge.

Richard Matheson has come farther than any of them with "A Stir of Echoes" (*J. B. Lippincott Co.; 220 pp.; $3.50*), which is by far the best novel I have seen on the telepathy theme. His hero, Tom Wallace, is a recognizable member of a recognizable suburban community, who is hypnotized by his brother-in-law at a neighborhood party. A careless command leaves him with a "free" mind—free in that he begins to discover psi powers that had been submerged in his normalcy. He sees a ghostly woman in his own home (the least convincing and necessary part of the story) . . . he begins to "hear" people's thoughts, and to sense emotional crises. As the echoes stir more violently and unpredictably in his mind, his personal torment grows. His wife believes him insane—then shrinks from the proof that he is not.

Unfortunately, the author builds Wallace's problem up to the point where it can't be solved on any ordinary terms—then does just that, with a burst of melodrama, the customary solution to the ghost's dilemma, and a convenient blow on the head that boxes up the echoes as suddenly as they were unloosed. There is a superior motion picture in the book, and I suppose these conventional bits were put in for the sake of the average film-goer, but let's hope a subtle director gets hold of it.

Even though this is a story of people "just like us," and to that extent a sop to the demand for realism in present-day fiction, Matheson has handled his somewhat conventional—to SF readers—material so well, that he is no more letting his standards down than he was in "I Am Legend." At the moment he hasn't an equal for showing normality face to face with abnormality. The danger is that like Bradbury he will now move out of science fiction completely, but if he does, it is with more promise for solid accomplishment than Bradbury has shown. "A Stir of

Echoes" is a better book than "Dandelion Wine," and better writing, if not as literary.

OF STARS AND MEN, by Harlow Shapley. Beacon Press, Boston. 1958. 157 pp. $3.50

For a long time it seemed that Harlow Shapley might be going to carry on the work of making astronomy meaningful to laymen, that Jeans and Eddington handled so well a generation ago, and others before them. He is one of the world's foremost cosmographers, and there may be nobody alive with a better overview of the structure of the universe. Nevertheless, he is not that man, as this long-short essay proves.

Readers of this magazine will find very little new in it, either in facts or ideas. The press has taken it up as an amazing pronouncement, but it has been made by Shapley before, and by others as well. What he is doing is stating as a dogma, without bothering to go through the reasoning of present much of the evidence, that Man is not alone in the universe—that, in fact, there are probably 100,000,000,000 stars with planets enough like the Earth to harbor life, that if they are like Earth life must have arisen on most of them, and that if it has arisen it must have produced beings as intelligent as we are.

The other side of this picture, not shown at all in the book, is the statement attributed to the author recently. He is reported to have said that a man on the Moon would mean one less damn fool on Earth. This tosses the whole book and argument back into the category of an academic pronouncement, as dispassionate as Dr. Shapley's lifelong probing of space and counting of galaxies. They're out there, and we know it; they probably know we're here; but none of us will ever see the other.

Perhaps it is unfair to condemn an author like this, for arguments that are not in this book. Taken by itself, it is far more placid than I had hoped. Read Asimov on the chemical origins of life, in "Only a Trillion," if you want to be convinced of what Dr. Shapley tells you is so.

THE BLACK CLOUD, by Fred Hoyle. Harper & Brothers, New York. 1958. 251 pp. $2.95

This first fictional effort by the ringleader of England's "new" astronomers seems old-fashioned, like something Jules Verne would have written if he'd lived to write for Hugo Gernsback or—to be a little fairer—something John Taine might have written twenty-five years ago if he'd been an Englishman instead of a Californian.

The book opens as two sets of astronomers, in California and England, discover two sets of phenomena which turn out to be aspects of the same thing. A huge interstellar dust cloud is headed for the sun at a speed that will bring it here in about sixteen months—and it will be long enough in passing so that the Earth may freeze or roast. As the politicians try to keep the catastrophe a secret and ignore it away, the astronomers set up a scientific enclave in England to study the approaching cloud and insure their own survival.

The story begins with Vernean attention to equations and explanation, then proceeds with typical Taine satirical asides at the foibles of scientists and politicians, running along parallel with the discovery and solution of a series of interlocking physical and astronomical mysteries. Kingsley, the master-mind of the project, may be the author's projection of himself—the scratch-pad and blackboard astronomer who hasn't been near a telescope in fifteen years, but who is brimming with off-trail ideas and utterly impatient with fools.

Finally the scientific puzzles fall together in the conclusion that the cloud is alive, and in the last chapters Kingsley's crew establish communication and sit down to swap information with the cosmic critter, while the annoyed American and Russian "statesmen" start a mad race to be first to trigger an unwholesome end to mankind. The author, incidentally, has suggested in his "Frontiers of Astronomy" that living molecules could be formed in the vast moilings of the dust clouds.

We've outgrown this kind of science fiction, yet we need a scientific imagination like Hoyle's to leaven our more skillful manipulation of people and plot. Maybe he'll collaborate with someone like John Wyndham, and the result will be a new classic.

THE SURVIVORS, by Tom Godwin. Gnome Press, New York. 1958. 190 pp. $3.00

This book is the expansion of a rather short novelette, "Too Soon to Die," in the March 1957 *Venture*. The story cried out for amplification, and it's been well done.

A shipload of colonists bound through hyperspace to people the Earthlike world Athena are taken prisoner by the humanoid, hostile Gerns. The older men, the women and children, and anyone who seems unlikely fodder for the Gern slave-gangs are marooned on the hellish Ragnarok, a planet in the midst of an oscillating ice age, with utterly malevolent, highly intelligent native beasts, poisonous plants, decimating diseases. The castaways go down by the hundred, yet the tougher ones establish a foothold and begin to dig in.

We follow the story of the Rejects and their descendants through two hundred years, first learning to live in spite of the rigors of the hostile planet, then at least learning to live with it. And down through the generations they carry one purpose: to lure the Gerns back, to capture a Gern ship, and to have their revenge. The obstacles they surmount, and the way they win their revenge, are the story.

As usual, Gnome has a good yarn. I'll leave it to you to find out from their ads whether you can shave the announced price by a "Pick-a-Book" deal.

THE JOY WAGON, by Arthur T. Hadley. Viking Press, New York. 1958. 223 pp. $3.50

I wish someone who understands machines had written this comedy about the electronic computer that runs for President of the United States—but I suppose I've no right to violate my own rule against condemning an author for not doing something he never intended to do. "Mike" Microvac, for all his three thousand tubes and his similarities to various robots of fond memory, is not really a machine but a stand-in for a certain type of machine-made politician.

The author of this political burlesque was on the Harriman and Stevenson campaign staffs in 1956. I don't know whether he got his insider's view of contemporary politics there, but if so I'm inclined to quit voting and apply for the job of Hermit of Cold River, in the middle of the wildest chunk of the Adirondacks. There'll be few illusions left after you've stumped with Microvac, first for the Demlican nomination, then against the Repricrat candidate.

Mike gets his political acumen by applying his data-processing powers to the phenomena of American mankind in an election year. He sidles past the obstacles of committee breakfasts and two right hands, promisory doubletalk, baby-dandling, Mother, God and the farmers. When he stumbles, it's because of the illogic of human behavior, not for any fault in his electronic reasoning.

Have a look at yourself as a machine sees you.

MEN ON THE MOON, edited by Donald A. Wollheim.
CITY ON THE MOON, by Murray Leinster. Ace Books, No. D-277. 1958. 137+151 pp. 35¢

This theme volume, dedicated to Man on the Moon, is a good job. The novel half is Murray Leinster's 1957 Avalon book, handled in the author's most professional documentary style, with a large dose of sabotage and peril to make the pages turn faster. Donald Wollheim's half is a five-story anthology of Moon stories that progress gradually to the point where Leinster can take over.

In Raymond Z. Gallun's "Operation Pumice" we have the first rocket to the Moon. In A. Bertram Chandler's "Jetsam" the rocket lands —and finds that someone has been before them. Best of the lot, I think, is Frank M. Robinson's "The Reluctant Heroes," in which members of the first crew to man a Moon-post try to decide who shall stay to train the relief crew. H. B. Fyfe, in "Moonwalk," does another excellent job in bringing the desolate lunar landscape to life, and Murray Leinster again, in "Keyhole," introduces lunar life. In age the stories range from 1949 to 1953; they're all adequate and the last three are pretty good. Together they make a very nice sequence.

A CASE OF CONSCIENCE, by James Blish. Ballantine Books, New York 1958. 188 pp. 35¢

It is a pity that there is no hardbound edition of this novel by the consummately expert "reacher" who is his own toughest critic. Although it may be too difficult for the intellectual circle to understand, they just might learn to respect it—and science fiction. Maybe the British will oblige.

The book comes closest to C. S. Lewis' "Perelandra" triology of interplanetary religious mysticism, in that its whole problem is religious. But where Lewis grew more and more symbolistic and erudite, Blish—except in some of the biological discussion that may scare off the literati—is bitterly clear and explicit. His protagonist, the Jesuit biologist Ramon Ruiz-Sanchez, is more human and his dilemma more real than Ransome ever was.

Father Sanchez is one of a four-man scientific commission sent by the UN, a century from now, to appraise the first planet where we have found intelligent life on a human level. On the basis of their report, Lithia and its reptilian people will be shut off from Earth or become something between a colony and a partner. The first half of the book is a fascinating picture of Lithian society, ruled absolutely by evolution and reason—the concept of the Message Tree is a stopper, if ever there was one!—and in every detail a planetary Paradise.

And here Father Sanchez's dilemma is suddenly clear. He is convinced that this second Paradise is a trap laid for the souls of men by the Adversary he is sworn to fight—the Devil. Yet it is heresy in the eyes of his Church for him to suggest that Satan can create a perfect world.

Now, halfway through, the book changes scene and the problem grows more tangled. The four have returned to Earth, bringing a sealed jar in which the embryo of a Lithian is already beginning its strange development—very like the one in Edgar Rice Burroughs' neglected "Land That Time Forgot"—from animalcule to fish to amphibian to mature reptile. And as Father Sanchez is summoned to the Vatican to stand trial for heresy—as the physicist of the party goes back to Lithia to make it a secret nuclear armament-station—the Lithian, Egtverchi, begins coldly and maliciously to take human society apart.

Blish's picture of the semi-subterranean human society of 2050, simmering in its own repressions and frustrations, is as much a masterpiece as his construction of the Lithian Eden. Why it bursts apart as Egtverchi drags out its own cancerous guts for it to examine, is pretty clear—and by no means pretty.

The book will be different things to different readers, depending on their religious or irreligious bias. Is Father Sanchez right, and is this another key campaign in an endless, universal war between Good and Evil? Can Lithia, as a construction of the Devil, be destroyed by exorcism? Or is this a conflict of real, normally evolved alien cultures? Is Earth corrupting Lithia, or Lithia destroying Earth, and which deserves to inherit the galaxy? You may not like the book, but don't pass it up. It's a landmark in science fiction.

FANTASIA MATHEMATICA, edited by Clifton Fadiman. Simon and Schuster, New York. 1958. 298 +xix pp. $4.95.

This will probably be *the* anthology of the year, or of recent years, and as fine an example of the theme collection as we've seen since Marty Greenberg's first few for Gnome Press. The very widely read Mr. Fadiman, ready of wit, appreciative of ideas, and with extremely catholic tastes, has put together a collection of stories, limericks, jingles, excerpts, and other oddments which includes a generous sample of science fiction. The selections may be too familiar, but they're good.

The "Odd Numbers" which make up the first quarter of the book are just that. There is a poignant story by Aldous Huxley, "Young Archimedes," which is as unlike "Brave New World" as anything could possibly be. It is the story of a little Italian boy who was a great mathematical genius, but was not allowed to be a child. There are short, wry, satirical comments on the world's attitude toward mathematicians in Arthur Koestler's "Pythagoras and the Psychoanalyst," Karel Capek's "Death of Archimedes," "Peter Learns Arithmetic" from H.G. Wells' "Joan and Peter," and "Mother and the Decimal Point" from Richard Llewellyn's grand novel of Wales, "How Green Was My Valley." And in James Branch Cabell's suavely bawdy (a contradiction?) "Jurgen Proves it by Mathematics," readers of *Playboy* may find it hard to understand why "Jurgen" so horrified its world.

The largest section of the book, called "Imaginaries," is made up of stories built around mathematical themes or theorems. Most of them are bare-faced science fiction, and most—Heinlein's "—And He built a Crooked House," Clarke's "Superiority," A. J. Deutsch's "A Subway Named Moebius," Martin Gardner's "No-Sided Professor" and "Island of Five Colors," Miles J. Breuer's "Captured Cross-Section," Harry Stephen Keeler's "John Jones' Dollar,"—are quite familiar. But there are surprises: a *Saturday Evening Post* yarn in which the famous Alexander Botts uses the Moebius Strip in a characteristic way . . . Edward Page Mitchell's "The Tachypomp," vintage of 1873, concerning the theory of limits in a very pleasant way . . . "The Universal Library" by the German SF pioneer, Kurd Lasswitz, translated and with a commentary by Willy Ley.

You have Arthur Porges' switch on the pact-with-the-Devil, "The Devil and Simon Flagg," and the equally delightful, Brownishly wicked "Expedition," by Fredric Brown (another study of limits). You have Russell Maloney's "Inflexible Logic," in which the six chimps *do* start writing books, and H. Nearing's "Mathematical Voodoo," with its new teaching technique, and Nigel Balchin's keen-cutting "God and the Machine." Finally, you have Bruce Elliott's "The Last Magician," who tries to escape from a Klein bottle.

The last fifty pages are "Fractions": scraps of verse, limericks . . . everything and anything. You have Cyril Kornbluth, Lewis Carroll, Thomas Dekker, Sir Arthur Eddington, A.E. Housman, George Gamow, Edgar Allan Poe, and many, many more. All it lacks is something from "The Space Child's Mother Goose," which, after all, hasn't been published yet . . .

THE MAN WHO COULDN'T SLEEP, by Charles Eric Maine. J. B. Lippincott Co., Philadelphia. 1958. 224 pp. $3.00.

WORLD WITHOUT MEN, by Charles Eric Maine. Ace Books No. D-274. 1958. 190 pp. 35¢

There may be more prolific science-fiction writers than this Englishman, what with the multiplicity of pen names used by such beavers as Silverberg, Garrett, et al, but none of them have been getting books on the shelves so fast. Partly this has been the result of picking up a backlog of books published in England over a period of years, but mostly he must be an Edgar Wallace of the SF thriller.

The hardcover book, in fact, is labeled "a novel of menace" and shelved with the mysteries, but it's pure SF in theme. The hero, an English scientist, has learned to record and play back people's thoughts. At once he is assaulted from two directions: a mysterious woman with a brutal aide tries to force him to give her the device, and a Hollywood magnate, Zakon, offers money and power. It eventually appears that Zakon will use the psychotape to rule the world through his "dream palaces." There is much familiar running around, much who-is-who puzzling, and a rather choppy ending, but on the whole it is more interesting and better done than some of his recent books.

"World Without Men" is probably an answer to the complaint that there's no sex in science fiction, and an attempt to cash in on the promise that there is in this one. I don't know whether the English have had it in hard covers, as they have most of Maine's other books, or whether this is made to order for Americans.

We open in the future, five thousand years from now, in a world where men have been eliminated and the world is peopled entirely by parthenogenetically reproduced women—necessarily duplicating them selves genetically, over and over—who satisfy their emotional needs homosexually. There has been a centuries long drive to restore the twenty-seven-chromosome male cell . . . and then a man is found, frozen in the polar ice, and there is the possibility of getting a culture of real male cells to start with. At once all sorts of skulduggery starts, with the heroine caught in the middle.

If the author had stuck to this world and built his whole story around it, consistently, he might have had a very good book instead of a pretty good one. As it is, he breaks off the first story to go back to our own time, and in a series of flashbacks shows how the woman-world came to be. A sterility drug, merchandised as a cosmetic, starts the ball rolling . . . and it can't be stopped, until no one wants to stop it.

To my taste, this is the most interesting book Maine has done, and the most original. I still wish he hadn't chopped it up so, when he was doing so well with his "world without men."

MAN OF EARTH, by Algis Budrys. Ballantine Books, New York. No. 243. 1958. 144 pp. 35¢

This is the completely rewritten book version of "The Man From Earth," in *Satellite* back in 1956.

Allen Sibley, weasly little financial sharper in New York of 2197, gets himself into a corner where there is no way out but to cut loose and disappear. A mysterious organization guarantees him a successful vanishment, and he presently finds himself in a remade body, shanghaied to Pluto as the bad-tempered greenhorn, John L. Sullivan. It's really the old story of the draftee who can't get along with anyone, and who makes himself the bast damn soldier in the world in spite of everybody, but it's smoothly done and there's a not-too-obvious twist at the end.

Some of the recent Ballantine titles cry for a hard-cover edition, too. This one doesn't.

FOR LOVECRAFT COLLECTORS

It may be too late for you to get a copy of the Spring, 1958 issue of *Fresco,* the literary quarterly of the University of Detroit, which is entirely devoted to a symposium on H. P. Lovecraft. Steve Eisner, who pretty well has to be a Lovecraft enthusiast, was special editor for the issue. Write to *Fresco,* Tower Court, University of Detroit, Detroit, Michigan for a free copy—while the limited number last.

This is an excellent and comprehensive job that covers most aspects of Lovecraft's strange life and work. A bilbliography of Lovecraft in books is included, and one story, "The Music of Erich Zann." There are appreciations and anecdotes by familiar people like August Derleth, Dr. David H. Keller and Fritz Leiber, and others by people who knew Lovecraft or were helped by him in their own writing.

The most controversial item in the symposium is a reprint of Dr. Keller's argument, first published in *Fantasy Commentator* in 1948, that Lovecraft's writing and his lifelong illness were both the results of hereditary syphilis. This is vehemently refuted by Kenneth Sterling, also a physician and friend of Lovecraft, on grounds of insufficient evidence plus outmoded psychiatric theories. (Dr. Keller began to practice in 1914).

This will be one of the choice pieces of Lovecraftiana, as the man and the writer gradually come into perspective.

NEW PRINTING IN PAPER COVERS

2ND FOUNDATION: GALACTIC EMPIRE, by Isaac Asimov, Avon Books, New York. No. T-232. 192 pp. 35¢

The first of the "Foundation" series was published by Ace as "The 1000 Year Plan" (D-110), the second as "The Man Who Upset the Universe" (D-125). These were originally "Foundation" and "Foundation and Empire," respectively. Now here comes the third and last part, "Second Foundation," from another publisher, almost in its own name.

STRANGE PORTS OF CALL, edited by August Derleth. Berkley Books, New York. No. G-131. 173 pp. 35¢

Ten stories out of the twenty in the original 1948 anthology. They date from 1932 and '33 (my own "Forgotten") to 1946, and include some good but familiar stories with some so-so. Authors include van Vogt, Leiber, Kuttner, Bond, Bradbury, Long, Clarke, Ashton Smith, Philip Wylie, Donald Wandrei.

APE AND ESSENCE, by Aldous Huxley. Bantam Books, New York. No. A-1793. 152 pp. 35¢

Huxley's most savage satire of our degenerate future.

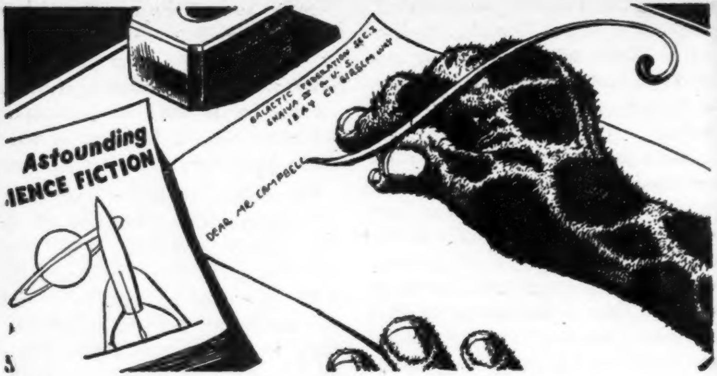
WORLD'S APART, by J. T. McIntosh. Avon Books, New York. No. T-249.

This was "Born Leader" when Doubleday published the hard-cover edition in 1954, and a good interstellar action story.

ADDRESS: CENTAURI, by F. L. Wallace. Galaxy S. F. Novel No. 32. 191 pp. 35¢

Galaxy's occasional novel reprints are now in standard PB format. "The Accidentals" storm the stars. Gnome edition, 1955.

THE END



BRASS TACKS

Dear John:

Although the International Society of Philosophical Engineers seems to be principally devoted to compilation of Dr. Finagle's laws (here is one they missed: "Regardless of the units used by either the supplier or the customer the manufacturer shall use his own arbitrary units convertible to those of either the supplier or customer only by means of weird and unnatural conversion factors") their choice of the chairman indicates broader interests. In fact, it seems to me that it is up to engineers and no one else to formulate the practical philosophies of life that men can successfully live by.

Let us compare the qualifications of an engineer and a professional philosopher for discovering the nature of the universe and man's relationship to the rest of it, which is philosophy's major task. The philosopher is constantly in search of elusive basic axioms on which to erect a self-consistent, logical structure. In this he is very much akin to a pure mathematician or an artist. These axioms in the final analysis come from experience, and depend on the individual philosopher's interpretation of his experience, whether conscious or unconscious. Once a philosopher has decided—arbitrarily, always and forever—on a set of axioms he proceeds to erect his structure with blind logic that disregards much if not most of the experience he actually possesses. The reason for this is simply that there does not exist a set of axioms on which a philosophy can be built that will take into account all of the available information. All axioms are arbitrary and therefore limited to certain well-defined fields. Beyond these fields these axioms are untrue and useless. Since the amount of information available, if not infinite, is certainly very much greater than the amount of information accounted for by even the most general of philosophies, it follows that any professionally developed, self-consistent philosophical theory is very inadequate for practical purposes.

On the other hand, an engineer has a totally different approach in formulation of his philosophy of life. He is the only true empiricist. He does not seek for basic axioms. He makes his experience his philosophy, directly, without any attempt at systematization or streamlining of any sort. He does not worry about being self-consistent. His experience tells him that the universe he lives in is not self-consistent. Anything can happen, and does. On one hand "if anything can go wrong in an experiment, it will," and "no experiment is reproducible," and on the other "anything can be made to work if you fiddle with it long enough." The engineer adapts himself to the world he lives in. He has to. He is exposed most intimately to the mainstream of life and is an active part of it. He has to take it as it comes. He has no time to worry about how things should be, or how things might be, or even to try to discover any basic laws underlying things as they are. All he can do, and all he is interested in doing, is to find some temporary, workable rules of thumb for a given situation with no hope that these rules of thumb will ever apply again in another similar situation, or even that they will still hold tomorrow. Thus, an engineer's philosophy is an intensely practical, workable set of empirical rules of thumb that is continuously being revised as circumstances change. It is, in other words, a living philosophy, not an elegant but rigid sculpture in logic, resting on a pedestal of "self-evident" axioms. It grows and changes, often assuming weird forms, like life itself, always in a state of flux. The first engineer was the guy who said all things flow.

Now I ask you: if you should have a real life problem of any kind, from a broken hand to a broken heart, who would be the most likely person to fix it, and fix it right? The guy who keeps asking questions that cannot be answered, or the guy whose life is to solve problems, regardless of whether they can be solved or not?—Paul Wyszkowski, Jr. C.I.C.,S.E.I.C., 30 Alamein Drive, Kingston, Ontario, Canada.

Speaking of broken-heart problems—I understand engineers have the lowest divorce rate of any group save bachelors.

Dear Mr. Campbell:

Since you want comments on the June cover, I'll gladly furnish some.

Having somewhat more than a speaking acquaintance with the problems of color reproduction, I was very interested in the article describing the process. After studying the cover in the light of the new process I am very enthusiastic about the whole thing. The colors are clearer than could reasonably be expected with the standard four-color halftone, probably because of the absence of the black which generally creeps in uninvited. The only problem I can foresee with this technique of reproduction is the fact that most professional artists automatically compensate for the loss of color in reproduction, which could lead to some rather gaudy results. I could probably comment at much greater length, but to do so intelligently I would have to see the original and compare it to the production cover, which is obviously impossible.

I would also like to add to the list of laws devised by Mr. and Mrs. Finagle two which seem to have been overlooked so far.

1. When any mechanical contrivance fails, it will inevitably do so at the most inconvenient possible time.

2. If, in the course of several months, only three worthwhile social events take place, they will all fall on the same evening.

I am now prompted to think of a third, which will follow a request for information. In the November '55 issue you ran a letter from a man who was purchasing agent for a lab, giving a list of materials ordered for the lab, and asking the readers to deduce what the laboratory was for. We moved shortly after that, and I didn't find a store that carried Astounding until some months later, and so never learned what a lab would do with such things as a 12-pound cannon ball (1865), a tomcat, a clothes wringer, model airplane spark plugs, 3 dozen empty aerosol bombs, et cetera. Would someone please tell me before I go mad? Which brings us to #3. If you miss one issue of any magazine, it will be the issue which contained the article, story or installment you were most anxious to read.

(a) All your friends either missed it, lost it, or threw it out.

This won't happen to me again unless it gets lost in the mails—I'm subscribing! — (Mrs.) B. Johnson, 7546 Farnum Avenue, Cleveland 30, Ohio.

Sorry you missed that issue! The lab was a rocket research lab.

Dear Mr. Campbell:

Do you mean that not one of our co-ASF-lovers has commented on the handsome two-page, two-color, slick paper spread on the works of our revered Dr. Finagle, which appeared in "Product Engineering," in April? Are they all, then, ivory-tower scientists not concerned with the more mundane aspects of science and technology? Are they all schizophrenic, the chore of reading the trade journals representing one aspect of their life, and the joy of reading ASF representing the other, and never the twain shall meet? Just let's not tell McGraw-Hill, so as not to upset them unduly.

The assumption that Finagle and von Nagel are one and the same is, in my opinion, totally unfounded. In fact, from researches I have done it would appear that Finagle is a member of an ancient Scottish family which claims a lineage dating back to prehistoric times. In the course of the years the vowel "a" in the name has appeared, and there has been some slight transposition of letters in the second syllable. However, the home of the ancestors of the learned doctor is even now celebrated in song and story; we've all heard of Fingal's cave.—Evelyn R. Fowler, Stamford, Connecticut.

Maybe it was the smuggler traditions of Fingal's Cave that inspired the good doctor to rectify equations that couldn't be justified?

Dear Sir:

Many of the axioms, postulates, laws, and corollaries pertaining to the time-honored Finagle Factor seem to fall within the category of the Irish Bull. An Irish Bull, as you probably know, is a statement which is outrageous on the face of it but which contains a strong element of truth or expresses an idea with great force. The Irish member of Parliament who said, "Ah, the shame of it! Little children, too young to walk or talk, are running about the streets shouting insults at the Government!" was making use of an Irish Bull. The Irish lady who spent the summer at a summer cottage but who was actually to be found most of the time down the street at a neighbor's house explained the situation succinctly enough by saying, "Well, you see, when I'm there I'm here!" The distinction between an Irish Bull and any other kind of a bull is an Irish Bull in itself: "An Irish Bull is pregnant."

A universally true statement concerning Finagle's Factor is that this factor is a constant which is a variable —a mathematical discovery of enormous significance. One of the first applications of Finagle's Factor was made by Gauss, the eminent German mathematician at Gottingen University in 1827. Gauss developed what is commonly known as "Riemann space"—two sets of intersecting curved lines as a co-ordinate system. If one set of lines is called "p" and the other set "q", and the distance between two points on the curved surface is "s", then the following formula holds:

$$ds^2 = E\,dp^2 + 2F\,dqdp + G\,dq^2$$

This well-known formula is a triple application of Finagle's Factor; the three "constants" E, F, and G are continuously variable as one progresses from point to point over the surface.—P. A. Smith, Great Lakes, Illinois.

It was an Irish biologist who explained, "Protozoa are small, and bacteria are small, but viruses are smaller than the both of 'em put together!"

Dear Mr. Campbell:

Although I had run across—or perhaps "tripped over" would be a better phrase—Finagle's Laws when I was studying biology in college, it wasn't until I read the letters in Astounding that I realized you were discussing a far more universal problem than you knew. My attempts at housekeeping have mainly been confined to looking after a small sister when my parents were away; nevertheless, I realize that many phenomena I had formerly assumed to be the result of the general cussedness of inanimate objects, small children, and dogs, may actually fall under the general law: "If anything can go wrong, it will."

For example:

If, in your box of clothespins, there is a broken one, it will turn up in every handful of pins you take.

On any stove, the thermostat must be set at least 25° higher or lower than the temperature you want (whether it should be adjusted up or down does not depend on the individual stove, but on a factor which varies with time).

If the repairman has just fixed the stove, it must be adjusted by at least 50°.

If you have just defrosted the refrigerator, some small child will want a cold drink.

Any vacuum cleaner would sooner take the nap off a rug than remove white threads from a dark rug.

Any kitchen timer will work perfectly until you set it and go to church.

No dog will knock a vase over unless it has water in it.

There are, of course, many more examples, but it looks rather as though Finagle has provided the one exception to his rule that "any result obtained through logic, deduction or laboratory experiment will not work when applied to practical matters." At least, I assume his law was deduced from laboratory experiments—perhaps it was obtained one day when his wife was sick and he had to look after the house?—Joan Scharfe, 620 Victoria Avenue, Westmount, Quebec, Canada.

Mrs. Finagle's Laws, perhaps?

Dear Sir:

In the April issue of Astounding William C. Boyd states that the horse was a sacred animal to our early ancestors, and that is the reason why eating its flesh was, and is, taboo.

This is a mistake. I know of no culture in Western or Northern Europe in which the Horse was sacred. The sacrifice to the various Norse Gods was a stallion, a bull, or a boar. The stallion ranking highest.

The flesh of the sacrifice was not

wasted, the worshippers ate the sacrifice at the feast.

When the first Christian missionaries came into the north, they proselyted the leading men, not the common people. In an effort to root out paganism they preached against the use of horse meat, and to eat it was considered to show that the eater still believed in the old gods of his fathers.

The sagas are full of allusions to eating horse meat, and of men being charged with paganism because of eating horse meat. Until the missionaries came there was no taboo against it.

The Norsemen did not have totem animals, the wolf and the bear were highly regarded as is shown by wolf and bear elements in personal names, but their flesh was eaten for the magical reason of imbuing the eater with the ferocity of the animal.

I hope that Mr. Boyd's statements concerning fungi are more accurate, I do not feel like experimenting with any variety I do not know personally to be harmless on his say so.—Arthur George Smith, Norwalk, Ohio.

Sort of ritual taboo in reverse?

Dear John:

I have read science fiction for many years and enjoy most of it greatly. I have never before written to any magazine, however, before this and I hope what I have to say will be of interest to you and your readers of Brass Tacks.

Ever since you published the first information about the Hieronymus machine I have followed Brass Tacks closely for more word of it. I might also add that I was highly skeptical and was only looking for more information because I was taking a survey of how many crackpots there were reading science fiction, BUT that is all changed now.

All that while, though, I was secretly nursing a hope that Hieronymus had accidentally stumbled across a new force of some kind; something from which a new science could be started, possibly a branch of electronics.

I am a professional electronics technician myself and would very much like to try to develop a commercial use from an effect of this kind if what he said were true.

Well, I guess you are wishing I would get to the point so here it is: I bought the August issue on July 23rd and on the 25th I got to the back and read the letter sent in by David M. Dressler (K6MLE) describing his experiments with Psionic Machine Type III. (By the way, Dave has just moved and his new address is 14833 Valerio Street, Van Nuys.

Myself being a ham (K6DGX), I wanted to meet him so I and Joe Parr (K6DSY) went to Van Nuys today to see Dave's machine, and the darned thing works!! We took along a friend who doesn't read science fiction, but who knows some electronics and he got a hot sensation in the same spot on the dial six times out of six. I got a hot sensation eight times out of eight at 90 degrees and 220 degrees on the dial. Joe Parr tried, but couldn't feel anything. Putting four of the machines in a series seems to triple the output, but only for a period of about ten minutes; after that the subject appears to become saturated and the sensation drops to its normal level.

Dave's machine is strictly breadboard and he used a sensor coil drawn in ball point pen on typing paper and a plastic triangle for a prism instead of Hieronymus' more elaborate layout. The material for the prism is not critical and Dave says any opaque material will work.

I built one of these things tonight and tried it on myself and family, getting a response from all of them in two spots on the dial. My sister gets a very distinct buzzing sensation and my mother and I get hot sensations.

In all cases I cover the prism so that any chance of someone faking is eliminated. You know yourself the odds against anyone picking the same spot on the dial six out of six, or eight out of eight times! And on a 360 degree circle!

I'm not saying this is a psionic machine, but I am saying that it does work, definitely!! I can't imagine the principle behind it, but it does do something! Not everybody gets results with this "thing," though, and I don't know why.

John, this thing certainly rates official testing to determine whether it is all imaginary or something very important. From my own experience with this thing I am sure Hieronymus hit on something and I wish more experienced electronics men and engineers would try and find out what is behind it.

In case you want the names of other witnesses and a character reference for myself they can be furnished. I am not another crackpot; this thing works!—James Lev, K6DGX, 5914 Priory Street, Bell Garden, California.

"You know perfectly well it is scientifically impossible, so it's obviously a hoax of some kind. It would be futile to investigate it, and would only lend false dignity to this fraud. Therefore we won't look into it at all. Even if it did work, we wouldn't like it!"

Dear Mr. Campbell:

BRAVO for the August editorial! Excerpt from a XXVth century history of human stupidity:

"The XXth century hyper-democrats were evolved enough to feel psychic pain and even had a name for it, 'anxiety.' They regarded it as a compensatory and somewhat shamefully ludicrous weakness properly associated with such minds as managed, despite rigorous educational safeguards, to develop themselves beyond the pitifully low norm of the period. That the anxiety was in large part the result of cultural forces ruthlessly applied to prevent the natural growth and unfolding of any superior mentality seems not to have occurred to them.

"They thought of themselves as devoted to human values. Upper class Chinese of the roughly contemporary Ching Dynasty bound the feet of infant girls, preventing normal growth. The little girls suffered years of constant physical pain until their feet at last consented to being stunted and crippled. The American hyper-democrats saw clearly enough the unnatural, inhumane aspect of the Chinese practice and condemned it.

"History to date offers no more hideous joke than the spectacle of the American mind-binders, in their brief heyday, feeling morally superior to the Chinese foot-binders."

Excerpt from XVIIIth century document (revised XXth century):

"We hold these truths to be self-evident, that all men are created interchangeable, that they are endowed by their Culture with certain unalienable rights, that among these are the good life, liberty in togetherness, and unfailing, state-bestowed happiness."

Excerpt from XXth century news story:

Dr. Robert M. Hutchins said today that in America not only may a moron be a complete success, but brilliant men often find themselves doing work suitable only to morons . . ."

Anonymous XXth century jingle:

See the happy moron.
He doesn't give a damn.
I wish I were a moron.
My God! Perhaps I am!

Query: How may a hyper-democrat know that he is *not* a moron?

Resp.: Even to wonder about it is undemocratic. If he suspects it of himself, he should have the grace to hide it and to be ashamed.

Excerpt from prophetic early XXth century poem:

And that after this is accomplished, and the brave new world begins
When all men are paid for existing and no man must pay for his sins,
As surely as Water will wet us, as surely as Fire will burn,
The Gods of the Copybook Headings with terror and slaughter return!—

R. M. McKenna, Box 1115, Chapel Hill, North Carolina.

But foot-binding is different! You can see deformed bones!

THE END

* * *

(*Continued from page* 7)

from the battle between two major forces:

1. The psychologists and sociologists are trying to make people recognize that neurotic compulsions are true breakdowns, and can *not* be repaired by sheer application of harsh force.
2. The confused reaction of the general population, which feels strongly that the individual is and must be held responsible for his behavior.

The major difficulty arises because J. Q. Public is intimately and thoroughly aware that *he* can't help the things he does . . . but that T. O. Guy (The Other Guy) who has hurt him must be punished in full for the offense. The ancient problem of "Gander Sauce." "It's sauce for the goose . . . but I'm a gander, so it isn't for me."

In their effort to put over the necessary realization that *some* behavior is compulsive, the psychological fraternity has—like other human groups!—gone hog-wild. They've carried a sound point to a wild fanaticism, to the acute injury of all people today. It injures the man who has a true neurotic problem, because he's a member of a group now hated because of the fanatical pressures of the psychological group. It injures the public, because the psychologist is protecting the lazy, the coward, the sheerly undisciplined, in the holy name of Psychological Problems, And they are injuring the kids themselves by withholding from them the disciplinary pressures that are needed to help an individual grow up straight.

The psychologists are fanatically-stupid in denying that there is *any* truth in "Spare the rod and spoil the child," just as thoroughly as those who maintain that the rod *always* is the answer to *all* problems are fanatically stupid.

In the case of the driver of the car with broken steering gear, it is clearly recognized that he is not morally guilty—*but that he is legally responsible.*

Psychologists need to appreciate that concept; the distinction between neurotic problem and undisciplined behavior must be recognized, and it is critically important that *legal responsibility be enforced in full on both types.*

I know of a specific instance of a man who has a compulsive-neurosis which drives him to wild, drunken driving. This individual had been arrested for drunken driving three times; the third conviction led to a two-year jail sentence. His license to drive was permanently denied, and he was forbidden to own an automobile. A young neighbor of mine, driving home from his graduation from VMI, was killed when his car was knocked off the road by this drunken driver's fourth offense, driving without license, and in a stolen car.

Evidently, such an individual has a neurotic compulsion; it is not simple carelessness, nor simple indifference to the welfare of others. He has a definite compulsion to drive wildly when drunk—and a compulsion to get drunk. The latter is the fairly familiar compulsion of periodic alcoholism; what makes this individual so deadly is that he has a double-action compulsion. The wild driving is triggered by the drunkenness.

That it is a genuine, noncontrollable compulsion is undoubtedly true. Morally, the man is not guilty.

But legally—which simply means "in practical terms in a workable society"—he is responsible. Such behavior may indeed be beyond his ability to control it.

Under those conditions, it becomes necessary for others to control it for him . . . *even if it kills him to do so!* If a vampire be defined as an entity which cannot live save by drinking human blood, then even though this action is a result of real, absolute need—the vampire must be deprived of his essential, even though it means death to him.

The Declaration of Independence is wrong; it is not true that *all* men have a right to life, liberty, and the pursuit of happiness. The rights to those are *not* unalienable. A murderer alienates himself from those rights; life, liberty, and the pursuit of happiness are, therefore, taken from him.

The neurotic compulsion is not controllable; the individual possessed by one is not morally responsible for his actions.

But he must be held legally responsible. If the steering mechanism of my car fails, I will be held legally responsible. If I do not carry adequate liaibility insurance, my property can be taken from me in making restitution for the damage done.

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If a man has a compulsive fear neurosis—he will act in such a manner as to avoid exciting that neurosis to its overwhelming action. If he is a claustrophobe, he will most carefully avoid getting into spots where his overwhelming neurosis takes command. If he is an altophobe, he will take care not to get into a high place where his neurosis takes command.

The drunken driver's failure is not that of yielding to an overwhelming compulsion; he cannot avoid that.

His responsibility is to do as he would do if it were a phobia that immediately hurt *him*—to stay away from the phenomena that trigger the compulsion into action.

Once the neurosis is triggered, the neurotic truly cannot prevent its taking command of him. But he is responsible for seeing that it is not triggered into action . . . no matter how much that limits his right to life, liberty and the pursuit of happiness.

If an individual shows that he has a neurotic compulsion to reject responsibility of all kinds—that individual must be stopped. He has, then, alienated his own right to life, liberty and the pursuit of happiness. If he can be stopped only by death, then he must be killed in defense of the rest of Mankind.

An individual can be permitted an uncontrollable neurosis *only if he controls himself in such a manner as to prevent the excitation of the untrollable neurosis.* Dynamite, once excited into action, is uncontrollable. But that does not mean that dynamite is an uncontrollable explosive.

The psychologists and sociologists, in preaching the true fact that a neurosis can be uncontrollable, are overlooking the fact that, like dynamite, the thing is safe if the owner avoids situations which will unleash it. And *that* is something the individual *must* be forced to do—or accept that he has himself alienated his rights to life and liberty.

The psychologists and sociologists must, also, recognize that not *all* resistance to discipline is neurotic resistance. Any sane organism seeks the least-effort path to satisfaction; to do otherwise is unsane. If simple grab-it-and-run is the least-effort path to satisfaction, then any sane individual will learn to be a grab-raid artist. If the juvenile's tendency to grab what he wants is invariably attributed to neurotic compulsion, so that punishment is asserted to be useless, then grab-raiding is in fact the least-effort solution to satisfaction, and any sane youngster will use that method. It's an obvious fact that it takes less effort to steal what you want than to earn it; if it not only takes less effort, but entails no risk of punishment, then doing otherwise becomes unsane behavior!

There is a place for the club, the hard, harsh, physical punishment. It conveys the fact that while stealing may be less effort—it's more risk. And if it isn't more risk, then theft is the sane way of life.

And don't talk about "the risk of social disapproval," either. The present tendency is for the juvenile delinquent to get approval from his friends for sane behavior—which, under present conditions, it is—and to get hovering attention from Youth Boards, Social Workers, and State Psychologists. Where's the "social disapproval" of his act? He gets rewarded, not punished. Call it an "attention-getting device" if you like; it's ultimately sane, since it yields precisely what an attention-getting device should yield, if it were a sound one. Attention. Approval of friends. Success.

There's no point in preaching "Crime doesn't pay," when you are doing things which make crime have so low a risk that it does pay. The hard fact of reality is that, under those conditions, *only crime pays*. Any sane youngster *must* learn to be a criminal.

The psychologists have the duty of making the public aware that compulsive neurosis *is* something the individual cannot control—but they have a second duty, one they have been failing disastrously. They must, also, distinguish between true compulsion and sheer, simple lack of discipline. That, they have failed in most egregiously.

The policeman needs a club, and a leak-proof jail to back him up. He needs a gun, to shoot down and kill the compulsively homicidal attacker.

And the psychological fraternity needs to acquire a bit of humility; it may be true that a perfected psychotherapy could cure the compulsive neurotic and psychotic—but no such perfected therapy exists. As of *now*, psychiatry is incompetent. It is perfectly true that beating a neurotic will not cure him—but it will tend to make him avoid the trigger that makes him behave neurotically. Claustrophobes, who certainly do have overwhelming neurotic behavior patterns, manage with remarkable success, to avoid the trigger situations.

Beating a rapist won't cure his neurosis, any more than it would cure a claustrophobic neurosis. But if the *personal* discomfort of claustrophic fear serves to induce the claustrophobe to avoid situations that trigger his neurosis, we might induce a rapist to avoid situations that triggered his overwhelming compulsion, too, if we made it sufficiently painful *to him.*

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This isn't psychotherapy, of course. But so long as psychotherapy has such a feeble curative power, it is the duty of the psychological fraternity to have the appropriate degree of humility, and base their recommendations on what they can *not* do as well as on what they *can.*

The best study of the practical success of psychoanalysis yet made was recently reported by the New York *Herald Tribune*. It showed that, among those who accepted treatment, and stayed with it to the end, about one third could be considered "cured."

Since patients were voluntarily paying for the treatment, they couldn't be made to continue; a large number dropped out.

And no control experiment could be run, to determine what the spontaneous cure rate was.

However, among institutionalized psychotics, in institutions where, by reason of extreme inadequacy of budget, practically no psychiatric treatment is available, the spontaneous release rate seems to run about thirty per cent.

It would, indeed, be appropriate to substitute psychotherapy for simple force . . . if the psychotherapy were competent. At present, it simply is not. The effort to substitute an incompetent restraint for an undesirable restraint on delinquency is, currently, causing an exponential rise in the youth-crime rate.

The proper treatment for an open wound in a joint, such as the knee, or elbow, is treatment with antibiotics, careful aseptic cleaning of the wound, surgical repair as needed, and bandaging to protect the wound.

A century ago, however, the wise surgeon treated such a wound by amputation above the joint, with cauterization of the stump. It cost the patient a limb, sometimes for a quite minor penetration of the joint-capsule—but in the absence of effective antibiotics and antiseptics, infection of the joint capsule was something no surgeon could overcome.

By acknowledging, however regretfully, their inability to handle the infection of a joint capsule, and taking the limb off above the affected joint, it might produce a somewhat handicapped individual . . . but a live one.

It is unquestionably true that psychotherapy is the proper answer to the problem of the compulsive neurosis.

Until we have a competent psychotherapy, however, the mind-healer should, like last century's surgeon, recommend a crippling, but effectively life-saving technique.

Currently, there is too much tendency for the psychotherapist to claim, simultaneously, "It is a young science; you must give us time!" *and* "Leave these problems to us; we have special training that enables us to understand them."

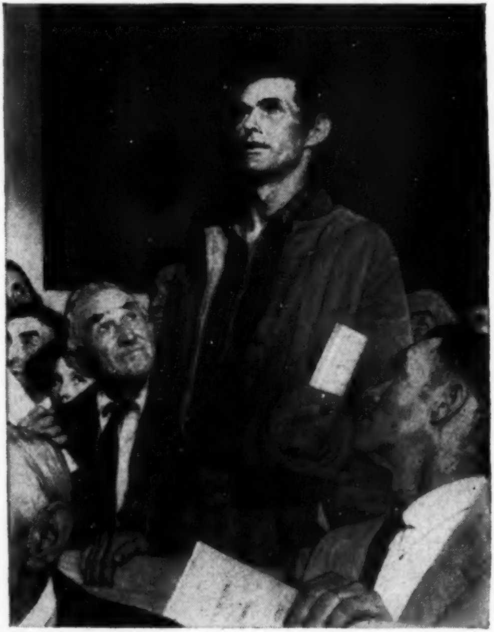
Look, friends; they can't have that proposition *both* ways! Either they know the field thoroughly enough to be held fully responsible for their decisions—and can't claim the irresponsibility of the youthful beginner! —or they do not, and should not pre-empt the authority of the police experience.

Currently, in many major cities, the sane, realistic juvenile is abstracting from his reality-experience that *only crime pays.*

He's not neurotic on that; he's behaving in a sane, realistic, and judicious manner. *Crime does pay.*

THE EDITOR

HELP US KEEP THE THINGS WORTH KEEPING



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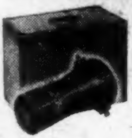

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